MICROBIOLOGY (MICROBIO)

MICROBIO 1 — COOPERATIVE EDUCATION/CO-OP IN MICROBIOLOGY
1 credit.

Full-time off-campus work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career. Students receive credit only for the term in which they are actively enrolled and working. The same work experience may not count towards credit in MICROBIO 399. Enroll Info: So st, and consent of supervising instructor and academic advisor.

Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2010

MICROBIO 100 — THE MICROBIAL WORLD
3 credits.

Roles of microorganisms and viruses in nature, health, agriculture, pollution control and ecology. Principles of disease production, epidemiology and body defense mechanisms. Biotechnology and the genetic engineering revolution. Primarily for non-science majors; not accepted for degree credit in Bacteriology. Enroll Info: Open to Fr. No degree credit for both Bact 100 101 or 303

Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2019

MICROBIO 101 — GENERAL MICROBIOLOGY
3 credits.

Survey of microorganisms and their activities; emphasis on structure, function, ecology, nutrition, physiology, genetics. Survey of applied microbiology—medical, agricultural, food and industrial microbiology. Intended to satisfy any curriculum which requires introductory level microbiology. See 102 if laboratory is desired. Enroll Info: CHEM 103 or 108 or 109 or 115. Stdts may not rec cr for both Bact 101 303. Stdts with 1 sem organic chem who will continue in biol or phys sci take 303. Open to Fr

Requisites: CHEM 103, CHEM 108, CHEM 109, or CHEM 115
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 102 — GENERAL MICROBIOLOGY LABORATORY
2 credits.

Covers techniques and procedures used in general microbiology, including cultivation, enumeration, aseptic techniques, physiology and selected applications. Enroll Info: Bact 101 or concurrent registration (preferred). Stdts may not receive credit for both Bact 102 304. Open to Freshmen

Requisites: MICROBIO 101 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 289 — HONORS INDEPENDENT STUDY
1-2 credits.

Enroll Info: Enrolled in the CALS Honors Prgm Sophomore or Junior standing. INTER-AG 288
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2010

MICROBIO 299 — INDEPENDENT STUDY
1-3 credits.

Enroll Info: Open to Fr, So or Jr st written cons inst
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO 303 — BIOLOGY OF MICROORGANISMS
3 credits.

Basic biology of microorganisms, including structure, function, physiology, genetics, ecology, diversity, and evolution. Enroll Info: Prev crse in botany, zool, Biocore or gen biol; 1 sem org chem or con req.No degree cr for both Bact 101 303. Required of Bact majors, recommended for biol sci majors

Requisites: (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 383, or BIOLOGY/BOTANY 130) and CHEM 343 or concurrent enrollment; or declared in Doctor of Pharmacy program
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
MICROBIO 304 — BIOLOGY OF MICROORGANISMS LABORATORY
2 credits.

Introduction to modern laboratory techniques used to study the distribution and properties of microorganisms. This is the companion lab to Microbiology 303. Degree credits cannot be earned in both Microbiology 102 and 304. Enroll Info: Bact 303 or con req. No degree cr for both Bact 102 304. Required of Bact majors recommended for bio-sci majors
Requisites: MICROBIO 303 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 305 — CRITICAL ANALYSES IN MICROBIOLOGY
1 credit.

Train students to become scientific problem-solvers, to critically analyze data, and to comprehend the principles of microbiological research via active discussion of a combination of scholarly papers and contemporary, hot topics in our field. Enroll Info: MICROBIO 303 or con reg
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/FOOD SCI 324 — FOOD MICROBIOLOGY LABORATORY
2 credits.

Lab exercises dealing with food preservation, spoilage, and food poisoning. Isolation, identification and quantification of specific microbes occurring in foods, and food fermentations by bacteria and yeast. Enroll Info: None
Requisites: (MICROBIO 102 or MICROBIO 304) and FOOD SCI/MICROBIO 325 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/FOOD SCI 325 — FOOD MICROBIOLOGY
3 credits.

Principles of food preservation, epidemiology of foodborne illness, agents of foodborne illness, food fermentations and biotechnology. Enroll Info: None
Requisites: MICROBIO 101, MICROBIO 303, or M M & I 301
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 330 — HOST-PARASITE INTERACTIONS
3 credits.

Interrelationships between bacterial and viral parasites and their host cells or tissues. Stresses microbial strategies and mechanisms of colonization, invasion, pathogenesis and resistance or host defenses. Enroll Info: Bact 101 102; or Bact 303 304; or equiv
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2018

MICROBIO/AN SCI/BOTANY 335 — THE MICROBIOME OF PLANTS, ANIMALS, AND HUMANS
3 credits.

Examination of the structure and function of microbial communities that live inside and on host organisms (plants, animals, and humans). Introduction to general concepts of the microbiome and microbiota, and their relationship to host nutrition, health, and disease. Enroll Info: None
Requisites: MICROBIO 303
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO 375 — SPECIAL TOPICS
1-4 credits.

Subjects of current interest to undergrads. Enroll Info: Variable prerequisites depending on topic
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

Enroll Info: So or Jr or Sr st cons suprvsg inst, advisor, intrshp prog coordinator
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2013

MICROBIO 400 — STUDY ABROAD IN MICROBIOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enroll Info: Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
MICROBIO/SOIL SCI 425 — ENVIRONMENTAL MICROBIOLOGY
3 credits.

Microbial interactions in soils, water, extreme environments and biofilms. Modern methods for studying microbial ecology, role of microbes in nutrient cycles and biogeochemistry. Use of microbes for mitigating manmade environmental problems of industrial, agricultural, and domestic origin. Enroll Info: None
Requisites: MICROBIO 303 and (CHEM 341 or 343), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO 450 — DIVERSITY, ECOLOGY AND EVOLUTION OF MICROORGANISMS
3 credits.

Fundamental concepts relating to the phylogenetic diversity, ecology and evolution of microbes. Active learning methods applying these concepts will promote a deeper understanding of microbiology. Enroll Info: None
Requisites: MICROBIO 303
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 470 — MICROBIAL GENETICS & MOLECULAR MACHINES
3 credits.

An undergraduate-level course in modern microbial genetics and molecular processes. Emphasis on the use of eubacterial and eukaryotic microbes to elucidate cellular function. Discussion of experimental approaches to study microbes and their use in biotechnology, bioremediation, and medicine. Enroll Info: MICROBIO 303
Requisites: MICROBIO 303
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/SOIL SCI 523 — SOIL MICROBIOLOGY AND BIOCHEMISTRY
3 credits.

Transformations of nutrients and contaminants in soils and groundwater by microorganisms: emphasis on enzymatic mechanisms and metabolic pathways. Approaches for analyzing microbial populations and activities including molecular techniques. Applications of microbial activities for bioremediation of contaminated soils and groundwater. Enroll Info: Students should have completed one course in either Soil Science or Microbiology to feel comfortable with the course content.
Requisites: Senior standing, (CHEM 104, 109, or 116) and (ZOOGOLOGY/BIOLOGY 102, BOTANY/BIOLOGY 130, or ZOOLOGY/BIOLOGY/BOTANY 151), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO/BIOLOGY 525 — ADVANCED BIOLOGICAL LABORATORY PRACTICES: A RESEARCH EXPERIENCE
2 credits.

Theory and practice of techniques typically used in microbiological and related biological research; biological experimental data interpretation and analysis; practice writing a research paper, reading primary literature, presenting their work to peers, and self-directing an independent research project (including keeping accurate lab notebooks); critical thinking in controversial scientific research ethics. Enroll Info: None
Requisites: MICROBIO 303 and 304
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

MICROBIO 526 — PHYSIOLOGY OF MICROORGANISMS
3 credits.

Biochemistry of microbial processes. Bact 527 is the accompanying lab. Enroll Info: Bact 303, 370 either BIOCHEM 501 or BmolChem 603.
Requisites: BIOCHEM 501, BIOCHEM 507, or BMOLCHEM 503; or graduate standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
MICROBIO 527 — ADVANCED LABORATORY TECHNIQUES IN MICROBIOLOGY
2 credits.

This course will provide students with a strong foundation in modern methods of research in the biomedical sciences as they address hypothesis-driven scientific questions. Students will also be coached in and practice critical data analysis and scientific writing. Enroll Info: None
Requisites: Declared in Microbiology and MICROBIO 304
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/M M & I/PATH-BIO 528 — IMMUNOLOGY
3 credits.

Development and functions of immune response in animals; a comprehensive study of experimental humoral and cellular immunity. Enroll Info: Two sem chem and one sem zoology or gen biology
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/ONCOLOGY 545 — TOPICS IN BIOTECHNOLOGY
1 credit.

Seminars on current topics in agricultural, medical, and industrial biotechnology such as: microbiological production of food, drink, biopharmaceuticals; production methods, genetic engineering (vectors, recombination cloning), continuous fermentation; bioconversion processes and production of chemicals from biomass; plant biotechnology; transgenic animals. Enroll Info: BIOCHEM 501 and GENETICS 466 or equiv
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

MICROBIO 551 — CAPSTONE RESEARCH PROJECT IN MICROBIOLOGY
2 credits.

Students will conduct independent research in either a PI's laboratory or in small groups in our teaching laboratories. Students will discuss progress of their projects and research ethics, will write a research proposal and will prepare and present a poster with final results for the department Poster Session. The in-class students use microbiological, molecular, and bioinformatic approaches to investigate the microbial ecology of environmental microbial communities. Research-lab students will progress toward goals established by the research mentor / PI. Enroll Info: None
Requisites: MICROBIO 527
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO/GENETICS 607 — ADVANCED MICROBIAL GENETICS
3 credits.

Molecular genetic methods and related aspects of prokaryotic and lower eukaryotic biology, as well as critical analysis of the scientific literature. Approximately two-thirds of the course will focus on prokaryotes and one-third on lower eukaryotic microbes. Enroll Info: GENETICS 466 or equiv, BIOCHEM 501 or equiv, Grad st or cons inst
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018

MICROBIO/BIOCHEM/GENETICS 612 — PROKARYOTIC MOLECULAR BIOLOGY
3 credits.

Molecular basis of bacterial physiology and genetics with emphasis on molecular mechanisms; topics include nucleic acid-protein interactions, transcription, translation, replication, recombination, regulation of gene expression. Enroll Info: Bact 370 or equiv BIOCHEM 501 or equiv, or cons inst
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/PL PATH 622 — PLANT-BACTERIAL INTERACTIONS
2-3 credits.

Physiology, genetics, taxonomy, and ecology of bacterial pathogens, epiphytes, and symbionts of plants. Enroll Info: A course in advanced bacteriology; GENETICS 466 or equiv; BIOCHEM 501 or equiv; or cons inst
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 625 — ADVANCED MICROBIAL PHYSIOLOGY
3 credits.

Course topics will focus on microbial physiology with an emphasis on metabolic processes. Enroll Info: Bact 550 or equiv, and BIOCHEM 501 or 601 or con reg cons inst
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2013
MICROBIO 632 — INDUSTRIAL MICROBIOLOGY/BIOTECHNOLOGY
2 credits.
Application of modern techniques of genetics and physiology to the large-scale production of microbial products; industrial strain improvement, scale-up of microbial processes; survey of industrial processes using microorganisms. Enroll Info: Bact 526 BIOCHEM 501 or equiv
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

MICROBIO/ONCOLOGY/PL PATH 640 — GENERAL VIROLOGY-MULTIPLICATION OF VIRUSES
3 credits.
Bacterial and animal viruses, their structure, multiplication, and genetics. Enroll Info: Intro crses in bact, biochem genetics
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/BOTANY/GENETICS/M & I/PL PATH 655 — BIOLOGY AND GENETICS OF FUNGI
3 credits.
Fungal genetics, genomics, and physiology using plant pathogenic fungi and the genetic models Aspergillus nidulans and Neurospora crassa as model systems to explore the current knowledge of fungal genetics and plant/fungal interactions. Enrollment open to graduate students, but undergraduates welcome to contact instructor for permission. All students should have some prior coursework in genetics (such as GENETICS 466 or 467) and microbiology (such as MICROBIO 303). It is also recommended that students take PL PATH 300 332 prior to this course. Enroll Info: Graduate or professional standing
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 657 — BIOINFORMATICS FOR MICROBIOLOGISTS
3 credits.
Provides a practical and fundamental introduction to sequence-based analysis focused on microbial systems. No prior knowledge of computational biology is required. Emphasis on gaining a basic understanding of the principles of both classical and newer algorithms useful for bioinformatic analysis. Students will spend a significant portion of the class at the computer learning a number of skills including, but not limited to, unix command line, installation of bioinformatics programs (e.g. standalone BLAST), databases, and introductory programming in Perl. Evaluation will include a midterm exam and a project geared towards solving a problem of interest from the student’s current research. Topics to be covered include: BLAST, RNA-seq analysis; transcriptional binding prediction; genome sequence assembly, analysis and annotation; and comparative genomics. Other topics may be covered, as time permits. Note that this course requires that each student have access to a laptop that runs a linux/unix Operating System such as a Mac or a ChromeBook. PC Laptops running a VM are also acceptable. Enroll Info: None
Requisites: Graduate/professional standing or (MICROBIO 303, BIOCHEM 501, GENETICS 466, or 467)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO/BMOLCHEM 668 — MICROBIOLOGY AT ATOMIC RESOLUTION
3 credits.
Three-dimensional protein structures form the basis for discussions of high resolution microbiology; how particular problems are solved with given protein architectures and chemistries and how themes of protein structure are modified and recycled. Enroll Info: Biochem (e.g. BIOCHEM 501), molecular biol (e.g. Bact 526 or 612) required, one semester of physical chem preferred
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO 681 — SENIOR HONORS THESIS
2-3 credits.
Individual lab research for majors for an honors degree in bacteriology (LS students must take 3 cr per sem). Enroll Info: Hon prog candidacy
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2019
MICROBIO 682 — SENIOR HONORS THESIS
2-4 credits.
Continuation of 681. Enroll Info: Honors program candidacy Bact 681
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2018

MICROBIO 691 — SENIOR THESIS
2 credits.
Enroll Info: None
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

MICROBIO 692 — SENIOR THESIS
2 credits.
Enroll Info: None
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO 699 — SPECIAL PROBLEMS
1-4 credits.
Enroll Info: Sr or Grad st cons inst
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO 710 — MICROBIAL SYMBIOSIS
3 credits.
Covers the themes and diversity of plant and animal associations with microbes with an emphasis on beneficial relationships. Examples will be drawn from recent literature. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

MICROBIO 731 — SEMINAR
1 credit.
Reviews of microbiological subjects, and reports on research work. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO/M M & I 740 — MECHANISMS OF MICROBIAL PATHOGENESIS
3 credits.
Lecture-discussion. Host-pathogen relationships in microbial diseases. Entry level course for infectious diseases sequence (see Med Micro 760, 790). Enroll Info: Cons inst, MMI 301 or equiv a course in immunology
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/M M & I/PATH-BIO 790 — IMMUNOLOGY OF INFECTIOUS DISEASE
3 credits.
Immunobiology and immunogenetics of resistance to infectious disease agents of man and animals; immunoregulatory mechanisms associated with evasion of host immunity. Enroll Info: MMI 720 or equiv, MMI 740 or equiv, cons inst
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2015

MICROBIO 810 — CURRENT ISSUES IN MICROBIOLOGY
1 credit.
Required course for first-year Ph.D. graduate students in the Microbiology Doctoral Training Program (MDTP); combines faculty lectures, review of primary literature, student presentations, and small group discussions to explore the diversity of scientific topics comprising the field of contemporary microbiology. Enroll Info: None
Requisites: Declared in Microbiology doctoral program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO 811 — ADVANCED PROBLEMS IN MICROBIOLOGY
1 credit.
Required course for first-year Ph.D. graduate students in the Microbiology Doctoral Training Program (MDTP); combines faculty lectures, review of primary literature, student presentations, and small group discussions to explore the diversity of scientific topics comprising the field of contemporary microbiology. Enroll Info: 1st yr st in Microbiol Doctoral Training Progm
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
MICROBIO 875 — SPECIAL TOPICS
1-4 credits.
Of current interest to graduates. Enroll Info: Variable prerequisites depending on topic
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO 901 — ADVANCED SEMINAR
1 credit.
Recent advances in specialized areas of microbiology. Enroll Info: Bact 729 Grad st cons inst
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

MICROBIO/BIOCHEM/BMOLCHEM/M&M/I 914 — SEMINAR-
MOLECULAR BIOSCIENCES (ADVANCED)
1 credit.
During the fall semester, molecular biosciences trainees who have not achieved dissertator status will present seminars based primarily on literature related to their projects. During the spring semester, molecular biosciences trainees with dissertator status will present seminars based upon their own research. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO/BIOCHEM 917 — REGULATION OF GENE EXPRESSION
(ADVANCED SEMINAR)
1 credit.
Participants will discuss recent literature in topics related to prokaryotic and eukaryotic gene regulation. These topics include but are not limited to regulation of transcription, translation, and genome organization. Each week, one student participant will lead a critical discussion on a recent publication in the field of gene regulation. The discussion leader will explain the background materials, methodology, experimental results, and broader implications of the publication. All participants will be expected to take an active role in the discussion. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

MICROBIO/BIOCHEM/CBE 932 — BIOTECHNOLOGY TRAINING PROGRAM SEMINAR
1 credit.
Biotechnology Training Program trainees will present their research for critical review by audience. Enroll Info: Grad st. Required of Biotechnology Training Program trainees
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO 990 — RESEARCH
1-9 credits.
Full lab and literature review of a problem in microbiology. Leads to preparation of thesis and publication. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

MICROBIO 999 — SPECIAL PROBLEMS
1-6 credits.
Enroll Info: None
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2001