ECONOMICS, B.S.

A major in economics gives students a greater understanding of how people, businesses, and governments respond to their economic environments. Many of the issues that fill the newspapers–jobs, wages, taxes, the cost of living, inequality, pollution, poverty, and economic growth–are, in fundamental ways, economic issues. The daily decisions of businesses and consumers are largely economic. Economists seek to understand the decisions of businesses, consumers, and current economic issues by developing a systematic and thorough understanding of precisely how the economic system operates, including the mechanisms by which resources are allocated, prices determined, income redistributed, and economic growth promoted.

The analytical method of economics recognizes that various choices are open to a society in solving its economic problems. Students are often attracted to economics as a discipline precisely because they want to understand the decisions of people and businesses and to better understand and evaluate economic policy. To begin to approach these issues as an economist requires an understanding of economic theory, empirical methodology, and an understanding of the institutional details and advanced practice gained from intensive study of specific subfields of economics. Consequently, the undergraduate economics major is organized around a progression of courses that first provides a broad introduction to economics, then develops the theoretical tools that provide the foundation of modern economic thought, and finishes with advanced courses designed to provide greater in-depth knowledge of specific fields (such as labor markets, industrial organization, international economics, public finance, banking and finance, macroeconomics, microeconomics, and econometrics).

An economics major is valuable in the job market because the major is designed to train people to think analytically and clearly about a wide variety of issues. Economics graduates go on to pursue careers in a variety of fields including finance, data analytics, and public policy. An economics major is also good preparation for graduate work in a number of areas: business, law, public policy, economics, public administration, industrial relations, international relations, urban and regional planning, and environmental studies.

HOW TO GET IN

DECLARING THE MAJOR

- Complete one calculus course (for the Mathematical Emphasis option, MATH 221 or higher is required), and
- Complete any one ECON course (except ECON 100) at UW-Madison, and
- Achieve a 2.000 GPA in all ECON courses and major courses (i.e., calculus) at the time of declaration.

Students may not be declared in both the Economics major and the Certificate in Economic Analytics.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/ #requirementsforundergraduatestudytext) section of the *Guide*.

General

- Breadth–Humanities/Literature/Arts: 6 credits
- Education .
- Breadth–Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component;
 - or two courses providing a total of 6 credits
 - Breadth–Social Studies: 3 credits
 - Communication Part A & Part B *
 - Ethnic Studies *
 - Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF LETTERS & SCIENCE DEGREE REQUIREMENTS: BACHELOR OF SCIENCE (B.S.)

Students pursuing a Bachelor of Science degree in the College of Letters & Science must complete all of the requirements below. The College of Letters & Science allows this major to be paired with either the Bachelor of Arts or the Bachelor of Science degree requirements.

BACHELOR OF SCIENCE DEGREE REQUIREMENTS

- MathematicsComplete two courses of 3+ credits at the Intermediate or
Advanced level in MATH, COMP SCI, or STAT subjects. A
maximum of one course in each of COMP SCI and STAT
subjects counts toward this requirement.Foreign
LanguageComplete the third unit of a foreign language.L&S BreadthComplete:
• 12 credits of Humanities, which must include at least 6
credits of Literature; and
• 12 are dite of Science and
 - 12 credits of Social Science; and
 - 12 credits of Natural Science, which must include 6 credits of Biological Science and 6 credits of Physical Science.

Liberal Arts and Science Coursework	Complete at least 108 credits.
Depth of Intermediate/ Advanced Coursework	Complete at least 60 credits at the Intermediate or Advanced level.
Major	Declare and complete at least one major.
Total Credits	Complete at least 120 credits.
UW-Madison Experience	Complete both: • 30 credits in residence, overall, and • 30 credits in residence after the 86th credit.
Quality of Work	 2.000 in all coursework at UW-Madison 2.000 in Intermediate/Advanced level coursework at UW-Madison

NON-L&S STUDENTS PURSUING AN L&S MAJOR

Non-L&S students who have permission from their school/college to pursue an additional major within L&S only need to fulfill the major requirements. They do not need to complete the L&S Degree Requirements above.

OPTIONS IN THE MAJOR

The department offers two major options. Students may declare only one option and must complete all requirements including Residence and Quality of Work standards. Options are:

Option A: Economics provides a well-rounded major in economics that is valuable for employment following graduation, or subsequent graduate work in business, law, public policy, and related disciplines.

Option B: Economics–Mathematical Emphasis provides students with the mathematical and statistical background needed for in-depth study of the analytical aspects of economics. Its requirements are designed to prepare students for graduate study in economics and related fields, or for careers as professional economists in business or government. For specific Mathematical Emphasis requirements, see the section below (p. 3).

REQUIREMENTS FOR THE ECONOMICS MAJOR

MATH AND STATISTICS

Code	Title	Credits
Mathematics (com	plete one):	5-10
MATH 221	Calculus and Analytic Geometry 1	
or MATH 211	Calculus	
or MATH 275	Topics in Calculus I	
MATH 171 & MATH 217	Calculus with Algebra and Trigonometry I and Calculus with Algebra and Trigonometry II	
Statistics (complet	e one):	3-4
ECON 310	Statistics: Measurement in Economics (Recommended)	
STAT 302	Accelerated Introduction to Statistical Methods	

	ECON 400	Introduction to Applied Econometrics	
	ECON 410	Introductory Econometrics	
	MATH/STAT 309	Introduction to Probability and Mathematical Statistics I	
	STAT 311	Introduction to Theory and Methods of Mathematical Statistics I	
	STAT 324	Introductory Applied Statistics for Engineers	
	STAT 340	Data Science Modeling II	
Т	otal Credits		8-14

ECONOMICS

30 credits to include:

Code	Title	Credits
Microeconomics & I	Macroeconomics (complete one):	4-8
ECON 101 & ECON 102	Principles of Microeconomics and Principles of Macroeconomics	
ECON 111	Principles of Economics- Accelerated Treatment	
Intermediate Theor	ry (complete one):	6-8
ECON 301 & ECON 302	Intermediate Microeconomic Theory and Intermediate Macroeconomic Theory	
ECON 311 & ECON 312	Intermediate Microeconomic Theory - Advanced Treatment and Intermediate Macroeconomic Theory - Advanced Treatment (Honors Econ)	
Two Core ECON cou	urses: ¹	6-8
ECON 400	Introduction to Applied Econometrics	
ECON 409	Study Abroad in Advanced Economics	
ECON 410	Introductory Econometrics	
ECON 435	The Financial System	
ECON 441	Analytical Public Finance	
ECON 442	Macroeconomic Policy	
ECON 448	Human Resources and Economic Growth	
ECON 450	Wages and the Labor Market	
ECON 451	The Economic Approach to Human Behavior	
ECON 455	Behavioral Economics	
ECON 458	Industrial Structure and Competitive Strategy	
ECON 460	Economic Forecasting	
ECON 461	International Macroeconomics	
ECON 464	International Trade	
ECON 467	International Industrial Organizations	
ECON 468	Industrial Organization and Imperfect Competition	
ECON 475	Economics of Growth	

Markets with Frictions
Game Theory and Economic Analysis
Law and Economics
Insuring Life's Risks: Health, Aging, and Policy
The Economics of Health Care
Fundamentals of Data Analytics for Economists
Honors Tutorial in Research Project Design
Markets and Models
Population Economics
Issues in International Macroeconomics
Issues in International Trade
Issues in International Finance
Topics in Economics
Topics in Economic Data Analysis
6-14
econ course not used above or one
Introduction to Finance
Development of Economic Thought
The Real Estate Process
Study Abroad in Intermediate Economics
Data Visualization for Economists
Investment Theory
Sports Economics
Money and Banking
Environmental Economics
The Economics of Growing-up and Getting Old
Survey of International Economics
Economics of Poverty and Inequality
Energy, Resources and Economics
Contemporary Economic Issues
Urban and Regional Economics
Economic Decision Analysis
Government and Natural Resources
Latin American Economic Development

	ECON 465	The American Economy to 1865	
	ECON/ HISTORY 466	The American Economy Since 1865	
	ECON/AAE 473	Economic Growth and Development in Southeast Asia	
	ECON/AAE 474	Economic Problems of Developing Areas	
	ECON/AAE 477	Agricultural and Economic Development in Africa	
	ECON/ PHILOS 524	Philosophy and Economics	
	ECON/AAE 526	Quantitative Methods in Agricultural and Applied Economics	
	ECON/A A E/ F&W ECOL 531	Natural Resource Economics	
	ECON/REAL EST/ URB R PL 641	Housing Economics and Policy	
	ECON/SOC 663	Population and Society	
	ECON/A A E/ ENVIR ST/ URB R PL 671	Energy Economics	
Тс	otal Credits		30

REQUIREMENTS FOR THE MATHEMATICAL EMPHASIS:

View as listView as grid

• ECONOMICS: MATHEMATICAL EMPHASIS (HTTP://GUIDE.WISC.EDU/ UNDERGRADUATE/LETTERS-SCIENCE/ ECONOMICS/ECONOMICS-BA/ ECONOMICS-MATHEMATICAL-EMPHASIS-BA/)

RESIDENCE AND QUALITY OF WORK

- 2.000 GPA in all ECON and major courses
- + 2.000 GPA on 15 upper-level major credits taken in residence 2
- 15 credits in ECON, taken on the UW–Madison campus

HONORS IN THE ECONOMICS MAJOR

To participate in Honors in the Economics Major, students must be declared in the Mathematical Emphasis option. For further information, see the Mathematical Emphasis requirements (http://guide.wisc.edu/ undergraduate/letters-science/economics/economics-ba/economicsmathematical-emphasis-ba/) and consult your Economics undergraduate advisor.

FOOTNOTES

1

At least two core ECON courses must be taken in residence at UW– Madison, and not via transfer or a UW–Madison Study Abroad program.

2

Intermediate and Advanced level ECON courses are Upper Level in the major.

UNIVERSITY DEGREE REQUIREMENTS

Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.
Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.
Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.

LEARNING OUTCOMES

- 1. Understand the fundamental concepts of economics and how those concepts apply to real world issues.
- 2. Construct and evaluate economic models, their assumptions, and conclusions.
- Acquire a diverse set of skills and strategies in mathematical reasoning/statistical and computational techniques/deductive logic/ problem solving.
- 4. Use mathematics/computational/statistical techniques to analyze real world situations and policies.
- 5. Use economic analysis to critically evaluate public policy proposals.

FOUR-YEAR PLAN

SAMPLE FOUR-YEAR PLAN

This Sample Four-Year Plan is a tool to assist students and their advisor(s). Students should use it—along with their DARS report, the Degree Planner, and Course Search & Enroll tools—to make their own four-year plan based on their placement scores, credit for transferred courses and approved examinations, and individual interests. As students become involved in athletics, honors, research, student organizations, study abroad, volunteer experiences, and/or work, they might adjust the order of their courses to accommodate these experiences. Students will likely revise their own four-year plan several times during college.

Freshman

Fall	Credits Spring	Credits
Quantitative Reasoning A	4 ECON 101	4
Communication A	3 Ethnic Studies	3
Foreign Language	4 MATH 221	5

Physical Science Breadt	h	3 Foreign Language	4
14			
Sophomore			
Fall	Credits	Spring	Credits
ECON 102		4 ECON 301	4
Biological Science Breadth		3 ECON 310	4
Foreign Language		4 Humanities Breadth	4
Literature Breadth		3 Foreign Language	4
INTER-LS 210		1	
	1	5	16
Junior			
Fall	Credits	Spring	Credits
ECON 302		4 Econometrics (ECON 400 or 410)	4
Economics elective or core econ course		4 Humanities Breadth	3
Literature Breadth		3 Communication B	4
Science Breadth		4 Elective	3
	1	5	14
Senior			
Fall	Credits	Spring	Credits
Core econ course		4 Elective	4
Core course		4 Elective	4
Elective		3 Elective	4
Elective		4 Elective	3
	1	5	15

Total Credits 120

THREE-YEAR PLAN

SAMPLE THREE-YEAR PLAN

This Sample Three-Year Plan is a tool to assist students and their advisor(s). Students should use it –along with their DARS report, the Degree Planner, and Course Search & Enroll tools – to make their own three-year plan based on their placement scores, credit for transferred courses and approved examinations, and individual interests.

Three-year plans may vary considerably from student to student, depending on their individual preparation and circumstances. Students interested in graduating in three years should meet with an advisor as early as possible to discuss feasibility, appropriate course sequencing, postgraduation plans (careers, graduate school, etc.), and opportunities they might forgo in pursuit of a three-year graduation plan.

DEPARTMENTAL EXPECTATIONS

A three-year degree is feasible for students with a variety of backgrounds and specific preparation. Students planning to graduate within three years with an Economics major should consult with an advisor (https:// econ.wisc.edu/undergraduate/academic-advising/) as soon as possible, and should ideally be entering the University with a minimum of 30 advanced standing credits, and have satisfied the following requirements with course credit or via placement examination:

- ECON 101 Principles of Microeconomics
- Communication Part A

- Quantitative Reasoning Part A
- Placement into MATH 221 Calculus and Analytic Geometry 1
- 3 credits of Literature, 3 credits of Biological Science
- 3-4 units of foreign language

Summer coursework is not required to finish in three years, but students planning to finish in three years will find it easier if they take either an intermediate theory course during Summer One or an advanced elective during Summer Two.

First Year

First tear			
Fall	Credit spring	Credit Summer	Credits
ECON 102	4 ECON 301	4 ECON 302	4
MATH 221	5 Communication B	4	
Literature Breadth	3 Biological Science Breadth	3	
Physical Science Breadth	3 Elective (Intermediate or Advanced level)	4	
	15	15	4
Second Year			
Fall	Credit s pring	CreditS ummer	Credits
ECON 310	4 ECON 400 or 410	4 Summer Internship (optional)	0
Core Econ Course or elective	3 Physical Science Breadth	3	
Ethnic Studies/ Humanities Breadth	4 Humanities Breadth	4	
Elective (Intermediate or Advanced level)	4 Intermediate or Advanced COMP SCI, MATH, or STAT (if B.S.) or Elective (Intermediate or Advanced level) (if B.A.)	4	
	15	15	0
Third Year			
Fall	Credit spring	Credits	
Core econ Course	3 Electives (Intermediate or Advanced level)	12	
Electives (Intermediate or Advanced level)	11		
	14	12	

Total Credits 90

ADVISING AND CAREERS

ACADEMIC ADVISING

Academic advising (https://econ.wisc.edu/undergraduate/find-academicadvising/), along with general information about the undergraduate major and coursework, is available in Room 7238 of the Social Science Building. Find us on the campus map (http://www.map.wisc.edu/? initObj=bdg_SocSc&z=41.33&x=-0.158401&y=-0.09157). Email: econadvise@ssc.wisc.edu Phone: 608-262-6925

ECONOMICS CAREER DEVELOPMENT OFFICE

The Economics Career Development Office (https://econ.wisc.edu/ careers/) (ECDO) provides career advising to help economics students explore career options and search for jobs and internships including reviewing application materials (cover letter and resume). Career advisors work with students to develop an individualized job.internship search strategy based on the student's background and career goals. Career advising is open to declared economics majors or anyone considering majoring in economics who would like economics-specific career advice. Set up an appointment (https://econ.wisc.edu/careers/get-careeradvice/) or email your questions to econcareers@ssc.wisc.edu

PREPARATION FOR PH.D. PROGRAMS IN ECONOMICS

Students interested in pursuing graduate study should pursue Option B (mathematical emphasis) and augment the standard curriculum with higher-level mathematics and statistics courses. These may include:

Code	Title	Credits
MATH/STAT 309	Introduction to Probability and Mathematical Statistics I	
MATH/STAT 310	Introduction to Probability and Mathematical Statistics II	
MATH 421	The Theory of Single Variable Calculus	
MATH/STAT 431	Introduction to the Theory of Probability	
MATH 521	Analysis I	
MATH 522	Analysis II	
MATH/I SY E/ OTM/STAT 632	Introduction to Stochastic Processes	

It is important to consult early in the second year with the undergraduate advisor and/or the faculty member that directs the undergraduate program to design a plan of coursework.

DIRECTED STUDY

Directed Study (ECON 698, ECON 699) enables advanced students to pursue economic topics not covered in the regular course offerings. A student interested in Directed Study should prepare a research proposal and/or reading list; specific course requirements are arranged with an instructor who agrees to supervise the directed study project. Enrollment requires the consent of the instructor; a GPA of 3.00 or above in ECON; completion of the Intermediate economic theory courses (ECON 301 & ECON 302); at least one Advanced ECON course; and completion of the department's Directed Study form, available in 7238 Social Science.

INTERNSHIPS

Students can earn 1 credit for approved internships appropriate to the study of economics under course ECON 228. Students must enroll for ECON 228 in the same semester/session in which the internship is granted. Students should work a minimum of 100 hours per term. Prerequisites are declaration in the major economics major; a major GPA of 2.200 or higher; completion of at least four ECON courses at UW-Madison; completion of at least one Intermediate Theory course (ECON 301 & ECON 302); a completed application; and departmental approval.

L&S CAREER RESOURCES

Every L&S major opens a world of possibilities. SuccessWorks (https:// successworks.wisc.edu/) at the College of Letters & Science helps students turn the academic skills learned in their major, certificates, and other coursework into fulfilling lives after graduation, whether that means jobs, public service, graduate school or other career pursuits.

In addition to providing basic support like resume reviews and interview practice, SuccessWorks offers ways to explore interests and build career skills from their very first semester/term at UW all the way through graduation and beyond.

Students can explore careers in one-on-one advising, try out different career paths, complete internships, prepare for the job search and/or graduate school applications, and connect with supportive alumni and even employers in the fields that inspire them.

- SuccessWorks (https://careers.ls.wisc.edu/)
- Set up a career advising appointment (https://successworks.wisc.edu/ make-an-appointment/)
- Enroll in a Career Course (https://successworks.wisc.edu/careercourses/) - a great idea for first- and second-year students:
 - INTER-LS 210 L&S Career Development: Taking Initiative (1 credit)
 - INTER-LS 215 Communicating About Careers (3 credits, fulfills Comm B General Education Requirement)
- Learn about internships and internship funding (https:// successworks.wisc.edu/finding-a-job-or-internship/)
 INTER-LS 260 Internship in the Liberal Arts and Sciences
- Activate your Handshake account (https://successworks.wisc.edu/ handshake/) to apply for jobs and internships from 200,000+ employers recruiting UW-Madison students
- Learn about the impact SuccessWorks has on students' lives (https:// successworks.wisc.edu/about/mission/)

PEOPLE

FACULTY

- Aizawa, Naoki, Assistant Professor Labor Economics, Health Economics, Public Economics
- Blank, Rebecca, Professor Public Economics, Labor Economics
- Boerma, Job, Assistant Professor Macroeconomics, Public Finance
- Braxton Carter, Assistant Professor

Macroeconomics, Labor Economics, Consumer Finance

- Chiang, Harold, Assistant Professor Econometrics
- Corbae, Dean, Professor Macroeconomics
- Coulibaly, Louphou, Assistant Professor International Finance and Macroeconomics, Monetary Economics
- Deneckere, Raymond, Professor Microeconomic Theory, Industrial Organization
- Engel, Charles, Professor International Economics, Macroeconomics
- Fu, Chao, Professor Labor Economics
- Gregory, Jesse, Associate Professor Labor Economics, Public Economics
- Hansen, Bruce, Professor Econometrics
- Hendricks, Kennan, Professor Industrial Organization
- Houde, Jean-Francois, Professor
- Kirpalani, Rishabh, Assistant Professor Macroeconomics, Public Finance, International Economics, Financial Economics
- Lentz, Rasmus, Professor Labor Economics, Macroeconomics, Microeconomics
- Magnolfi, Lorenzo, Assistant Professor Industrial Organization, Applied Microeconomics, Applied Econometrics
- Martellini, Paolo, Assistant Professor Macroeconomics, Labor Economics, Urban Economics
- Mommaerts, Corina, Assistant Professor Public Economics, Labor Economics
- O'Connell, Martin, Assistant Professor Public Economics, Industrial Organization
- Porter, Jack, Professor Econometrics
- Quint, Daniel, Associate Professor Microeconomic Theory, Industrial Organization
- Rostek, Marzena, Professor Microeconomic Theory, Market Design, Finance
- Ruhl, Kim, Professor International Economics
- Scholz, John Karl, Professor Public Economics
- Seshadri, Ananth, Professor Macroeconomics, Public Finance
- Shi, Xiaoxia, Professor Econometrics
- Smith, Jeffrey, Professor Labor Economics, Public Economics
- Smith, Lones, Professor Microeconomic Theory
- Soelvsten, Mikkel, Assistant Professor Econometrics
- Sorensen, Alan, Professor Industrial Organization
- Sullivan, Christopher, Assistant Professor

Industrial Organization, Applied Microeconomics

- Taber, Christopher, Professor Labor Economics, Applied Econometrics, Public Economics
- Walker, James, Professor Labor Economics, Econometrics
- Weretka, Marek, Associate Professor Economic Theory, Finance
- West, Kenneth, Professor Macroeconomics, Econometrics
- Williams, Noah, Professor Macroeconomics
- Wiswall, Matthew, Professor Applied Microeconomics, Applied Econometrics, Labor Economics, Education and Demographic Economics
- Wright, Randall, Professor Macroeconomics, Finance

AFFILIATED FACULTY

• Chang, Briana

Financial Intermediation, Information Frictions, Search and Matching Theory

- Chinn, Menzie
- Chung, Kevin Quantitative Marketing
- Montgomery, James
 Economic Sociology, Religion, General Social Theory, Demography and Ecology, Social Psychology and Microsociology
- Sarada
- Economics of Entrepreneurship and Innovation
- Schechter, Laura Development Economics, Behavioral and Experimental Economics, Risk Analysis
- Smeeding, Timothy Poverty, Intergenerational Mobility, Inequality, Wealth

INSTRUCTIONAL STAFF

- Alder, Simeon, Faculty Associate Macroeconomics, Growth and Development, Matching
- Bykhovskaya, Anna, Associate Lecturer
- Chan, Stella, Lecturer
- Eudey, Gwen, Senior Lecturer Open Economy Macroeconomics
- Friedman, Matthew, Lecturer
- Glawtschew, Rebecca, Lecturer
- Hansen, David, Lecturer Development Economics and Labor Economics
- Hansen, Korinna, Senior Lecturer Applied Microeconomics, Health Economics
- Johnson, David, Senior Lecturer
- Kelly, Elizabeth, Faculty Associate
- McKelvey, Christopher, Lecturer Development Economics
- Muniagurria, Maria, Faculty Associate
 Development Economics and International Trade
- Pac, Gregory, Senior Lecturer
- Pauley, Gwyn, Lecturer

- Health Economics, Labor Economics
- Rick, Steven, Senior Lecturer

For a public directory of our faculty, please visit the Faculty page (https:// econ.wisc.edu/faculty/) on our website.