

# Economics, BS

The BS in economics incorporates a balance of economic theory, mathematical tools, and field applications while emphasizing the development of analytical skills.

Students who major in economics complete three sets of requirements for the major: mathematics and statistics courses that provide the skills needed for understanding economic theory and data; economic theory courses that provide the tools needed for analyzing economic issues; and field courses that apply economic tools to business, social, or specialized analytical issues.

## Learning Outcomes

### Foundational Knowledge

Comprehension of fundamental principles and concepts of economics, including understanding of how markets work, supply and demand models, different economic systems, and macroeconomic variables such as GDP and inflation.

Graduates will be able to:

- evaluate economic choices made by households, firms, and governments, and examine policy issues in areas such as education, health, labor, the environment, and equity;
- describe the performance of economies and choose appropriate models to evaluate and propose policies for improving aggregate economic outcomes, including growth, equity, and stability;
- explain the function of markets and apply supply and demand models to analyze various market outcomes under different conditions; and
- define key macroeconomic variables such as GDP, inflation, unemployment, wages, money, and interest rates, and analyze the economic forces impacting these macroeconomic variables and the rest of the economy.

### Critical Thinking and Problem Solving

Ability to apply economic reasoning to real-world problems.

Graduates will be able to:

- use economic theories and models to analyze and interpret real-world economic issues;
- develop problem-solving skills to address economic questions and policy issues; and
- apply critical thinking to evaluate various problems, scenarios, and outcomes.

### New Discovery

Economic reasoning and knowledge formation for economic and policy analysis.

Graduates will be able to:

- formulate questions about economic processes based on current knowledge;
- construct a hypothesis to guide economic inquiry;
- design economic models, identify variables, and interpret results;
- find and interpret economic data; and
- analyze and evaluate economic results to inform a hypothesis.

## Quantitative Skills

Mathematical reasoning, basic numeracy, and econometrics. Graduates will have a strong emphasis on quantitative skills.

Graduates will be able to:

- understand and apply econometric methods to analyze economic data;
- evaluate policy and/or scholarly recommendations based on the findings;
- use economic reasoning to appraise the trade-offs raised by different sides of a policy debate;
- apply advanced quantitative methods and models in economic analysis.

## Information Literacy

Acquisition, analysis, and summary of published economic information.

Graduates will be able to:

- locate and critically evaluate the relevance and credibility of information from electronic and print sources;
- identify reliable sources of information;
- cite reliable sources of information appropriately;
- identify questions addressed and methodologies used; and
- assess findings reported and conclusions drawn in published economic articles.

## Communication Proficiency

Written and visual presentation of economic information.

Graduates will be prepared with written communication skills and visual communication skills.

Graduates will be able to:

- write accessible and concise reports based on economic findings or literature searches;
- effectively communicate complex economic concepts and findings in written, oral, and visual form;
- construct visual presentations of results or findings from the economic literature, using appropriate visual aids such as graphs, charts, and diagrams; and
- orally present findings or results with appropriate media in an accessible manner.

## Requirements

The Bachelor of Science with a major in economics requires a minimum of 120 s.h. of coursework, including at least 41 s.h. of coursework for the major. To graduate, students must have a cumulative grade-point average of at least 2.00 in all college coursework attempted, all coursework attempted at the University of Iowa, all college economics coursework attempted, and all economics coursework attempted at the University of Iowa. Coursework in the major may not be taken pass/nonpass. Students pursuing the Bachelor of Science degree in Economics must complete the College of Liberal Arts and Sciences GE CLAS Core.

Students may be able to count a limited amount of transfer credit toward the economics major, but they are required to complete the following courses at the University of Iowa: ECON:3125 Intermediate Microeconomics; Advanced and ECON:3150 Intermediate Macroeconomics, and two of the applied field courses.

The major requires courses in mathematics and statistics, economic theory, and in applied field courses. Students should pay close attention to the order in which they take courses, since some courses are prerequisites for others.

The BS program is ideal for students who plan to pursue a technical career in the public or private sector, a graduate degree in economics, or a law degree.

The Department of Economics offers ECON:3050 Professional Preparation in Economics. This is not a required course to complete the BS with a major in economics; however, it is highly recommended for economics students as it prepares them for internships and future academic and professional career paths.

The BS with a major in economics requires the following coursework.

Requirements	Hours
Mathematics and Statistics Courses	15-18
Economic Theory Courses	14
Applied Field Courses	12

## Mathematics and Statistics Courses

The department recommends that students planning to pursue a graduate degree in economics take STAT:3100 Introduction to Mathematical Statistics I and STAT:3101 Introduction to Mathematical Statistics II rather than STAT:3120 Probability and Statistics. It also recommends that they complete additional coursework in mathematics, including MATH:2700 Introduction to Linear Algebra, MATH:2850 Calculus III, and MATH:3770 Foundations of Analysis.

Course #	Title	Hours
All of these:		
MATH:1850 & MATH:1860	Calculus I and Calculus II	8
ECON:4800	Econometric Analysis: Advanced Causal Inference With Data	3
One of these:		
STAT:3100 & STAT:3101	Introduction to Mathematical Statistics I and Introduction to Mathematical Statistics II (both courses required)	7
STAT:3120	Probability and Statistics	4

## Economic Theory Courses

Course #	Title	Hours
All of these:		
ECON:1100	Principles of Microeconomics	4
ECON:1200	Principles of Macroeconomics	4
ECON:3125	Intermediate Microeconomics: Advanced (Must be taken at the University of Iowa)	3
ECON:3150	Intermediate Macroeconomics (Must be taken at the University of Iowa)	3

## Applied Field Courses

Students complete four applied field courses (12 s.h.) selected from economics courses (prefix ECON) numbered 3325-4700, excluding ECON:3870 Federal Reserve Challenge and ECON:4050 Readings and Independent Study in Economics. At least two courses must be numbered between 4090-4700 and at least two of the applied field courses must be taken at the University of Iowa. Students are not guaranteed specific applied field courses. The availability of courses may be subject to prerequisites or restrictions.

## Teacher Licensure

Students interested in teaching in elementary and/or secondary schools should seek admission to the Teacher Education Program (TEP) in the College of Education.

To qualify for licensure in secondary teaching, students in the TEP complete a degree in education as well as a related College of Liberal Arts and Sciences degree. See Apply on the College of Education website for details on requirements and deadlines for applying to the College of Education and about TEP choices of majors leading to licensure.

## Honors

### Honors in the Major

Graduation with honors in economics recognizes high scholastic achievement based on grades and on completion of academic work beyond the requirements of the economics major. Students must have a cumulative grade-point average of at least 3.50 in all college coursework attempted, all coursework attempted at the University of Iowa, all college economics coursework attempted, and all economics coursework attempted at the University of Iowa. They must also successfully complete an honors thesis under the supervision of a faculty member.

Students begin by completing BUS:1999 Introduction to Research in Business at least three semesters prior to graduation. This course introduces students to research in the college and provides an opportunity to develop thesis questions and meet Tippie College of Business faculty members engaged in research. They must also complete ECON:3125 Intermediate Microeconomics: Advanced, ECON:3150 Intermediate Macroeconomics, and ECON:4800 Econometric Analysis: Advanced Causal Inference With Data before commencing thesis work.

After identifying a faculty member to advise them on their thesis and completing the coursework listed, students register for ECON:4999 Honors Thesis in Economics for two semesters while they complete their research and write their thesis. In the second semester of their thesis, students present their research in a poster format at the Undergraduate Research Festival.

Students interested in graduating with honors in economics should visit the department's honors advisor at least three semesters prior to graduation.

## University of Iowa Honors Program

Completing the economics honors requirements also satisfies the experiential learning requirement for the University of Iowa Honors Program. To learn more about graduating with

honors through the UI Honors Program, visit the Honors at Iowa website.

Membership in the UI Honors Program is not required to earn honors in the economics major.

## Career Advancement

The Bachelor of Science degree provides an excellent educational background for a variety of positions in business and government, research institutes and organizations, as well as academia. Graduates find employment in research, consulting, banking, financial institutions, industrial firms, and trade organizations and in federal, state, and local government agencies dealing with economic policy, regulation, and policy analysis. An undergraduate BS degree in economics also prepares students for the study of law and for graduate study in fields such as economics, public policy, business management, public administration, hospital and health administration, urban and regional planning, transportation, journalism, political science, and statistics.

Over 90% of students reported that they found permanent employment, were accepted to graduate school, or were not seeking employment within six months of graduation.

The Pomerantz Career Center offers multiple resources to help students find internships and jobs. For more information about careers, visit the Pomerantz Career Center website.

## Academic Plans

### Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the university's Four-Year Graduation Plan.

**Before the third semester begins:** at least one-quarter of the semester hours required for graduation.

**Before the fourth semester begins:** MATH:1850 Calculus I.

**Before the fifth semester begins:** MATH:1860 Calculus II and at least half of the semester hours required for graduation.

**Before the sixth semester begins:** STAT:3100 Introduction to Mathematical Statistics I (if chosen statistics course).

**Before the seventh semester begins:** ECON:1100 Principles of Microeconomics, ECON:1200 Principles of Macroeconomics, ECON:3125 Intermediate Microeconomics: Advanced, ECON:3150 Intermediate Macroeconomics, STAT:3101 Introduction to Mathematical Statistics II (if chosen statistics course), and at least three-quarters of the semester hours required for graduation.

**Before the eighth semester begins:** STAT:3120 Probability and Statistics (if chosen statistics course) and at least two applied field courses.

**During the eighth semester:** ECON:4800 Econometric Analysis: Advanced Causal Inference With Data, all remaining coursework in the major, all remaining GE CLAS Core courses, and a sufficient number of semester hours to graduate.

### Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and

should be discussed with an academic advisor. For additional sample plans, see MyUI.

## Economics, BS

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
Students must satisfy the Tippie College of Business residence requirement: 45 s.h. of UI coursework after admission to Tippie.		
GE: Sustainability <sup>a</sup>		
		<b>Hours</b>
		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
ECON:1100	Principles of Microeconomics <sup>b</sup>	4
MATH:1850	Calculus I <sup>b, c</sup>	4
GE: World Languages First Level Proficiency or elective course <sup>d</sup>		4 - 5
CSI:1600	Success at Iowa	1
Elective course <sup>e</sup>		2
		<b>Hours</b>
		<b>15-16</b>
<b>Spring</b>		
ECON:1200	Principles of Macroeconomics <sup>b</sup>	4
MATH:1860	Calculus II	4
RHET:1030	Rhetoric: Writing and Communication	4
GE: World Languages Second Level Proficiency or elective course <sup>d</sup>		4 - 5
		<b>Hours</b>
		<b>16-17</b>
<b>Second Year</b>		
<b>Fall</b>		
ECON:3125 or ECON:3150	Intermediate Microeconomics: Advanced <sup>f</sup> or Intermediate Macroeconomics	3
ENGL:1200	Interpreting Literature	3
STAT:3100	Introduction to Mathematical Statistics I <sup>g, h</sup>	4
GE: Understanding Cultural Perspectives <sup>i</sup>		3
GE: World Languages Third Level Proficiency or elective course <sup>d</sup>		4 - 5
		<b>Hours</b>
		<b>17-18</b>
<b>Spring</b>		
ECON:3150 or ECON:3125	Intermediate Macroeconomics <sup>f</sup> or Intermediate Microeconomics: Advanced	3
STAT:3101	Introduction to Mathematical Statistics II <sup>g, j</sup>	3
GE: Natural Sciences with Lab <sup>i</sup>		4
GE: World Languages Fourth Level Proficiency or elective course <sup>d</sup>		4 - 5
Elective course <sup>e</sup>		2
		<b>Hours</b>
		<b>16-17</b>
<b>Third Year</b>		
<b>Fall</b>		
STAT:3120	Probability and Statistics <sup>g</sup>	4
Major: applied field course <sup>k, l</sup>		3
GE: Historical Perspectives <sup>i</sup>		3
Elective course <sup>e</sup>		3

Elective course <sup>e</sup>	2
Elective course <sup>e</sup>	1
<b>Hours</b>	<b>16</b>
<b>Spring</b>	
Major: applied field course <sup>k, l</sup>	3
GE: Natural Sciences without Lab <sup>i</sup>	3
GE: International and Global Issues <sup>i</sup>	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	2
Elective course <sup>e</sup>	1
<b>Hours</b>	<b>15</b>
<b>Fourth Year</b>	
<b>Fall</b>	
ECON:4800 Econometric Analysis: Advanced Causal Inference With Data	3
Major: applied field course <sup>k, l</sup>	3
GE: Values and Society <sup>i</sup>	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3
<b>Hours</b>	<b>15</b>
<b>Spring</b>	
Major: applied field course <sup>k, l</sup>	3
GE: Literary, Visual, and Performing Arts <sup>i</sup>	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)	
<b>Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>125-129</b>

- h Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.
- i GE courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
- j Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
- k At least two of the applied field courses must be completed at the University of Iowa.
- l Students must complete four ECON courses (12 s.h.) numbered 3325-4700, excluding ECON:3870 and ECON:4050. At least two of the courses must be numbered between 4090-4700.
- m Please see Academic Calendar, on Office of the Registrar website, for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

- a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative or Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Society.
- b Fulfills a major requirement and may fulfill a GE requirement.
- c Enrollment in math courses requires completion of a placement exam.
- d Students who have completed four levels of a single language or two levels of two different languages in high school or college have satisfied the World Languages requirement. Students who have completed three levels of a single language may complete a fourth-level course in the same language or may choose an approved World Language and Cultural Exploration course. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor with questions concerning the World Languages requirement.
- e Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
- f Both ECON:3125 and ECON:3150 must be completed at the University of Iowa.
- g Students may choose to complete either STAT:3100-3101 or STAT:3120.