Department of Economics

3223 Social Science Plaza B; (949) 824-5788
http://www.economics.uci.edu/
Jan K. Brueckner, Department Chair

Economics is concerned with the way individuals or societies allocate scarce resources and distribute goods and services. Any situation requiring choice among competing alternatives can be viewed as an economic problem. Economic courses enable students to study the way individuals make these choices (microeconomics), the way governments make these choices (public choice), and the aggregate consequences of these choices (macroeconomics). In addition, the Economics curriculum addresses international trade, money and banking, and economic development of the less developed nations.

Faculty members in the Department of Economics have research and teaching interests that span a broad range of fields. In addition to strengths in micro theory, macroeconomics, and econometrics (Bayesian and classical), the Department has expertise in many applied fields, including economic history, industrial organization, international economics, labor economics, public choice and public finance, transportation economics, and urban economics. Members of the Department maintain close ties with members of the Department of Political Science, the Department of Statistics, and The Paul Merage School of Business. Members of the Department maintain affiliations with the Center for Economics & Public Policy, Institute for Mathematical Behavioral Sciences, Institute of Transportation Studies, Institute on Global Conflict and Cooperation, Center for the Study of Democracy, and program in International Studies.

Undergraduate Program

The Department offers majors in Economics, Business Economics, and Quantitative Economics, and an optional specialization in International Issues and Economics is available to students in all three majors. In addition, the Honors Program in Economics is open to high-achieving students in all three majors. The Department also offers a minor in Economics.

NOTE: Students may complete only one of the three Economics majors.

Admission to the Majors

Freshmen: Preference will be given to those who rank among the highest using the selection criteria as stated in the Undergraduate Admissions section of this Catalogue.

Transfer-Student Applicants: Transfer applicants with the highest grades overall who satisfactorily complete course prerequisites will be given preference for admission. All applicants must complete one course in microeconomics, one course in macroeconomics, and two semesters/two quarters of approved first-year calculus.

Change of Major: Information about change-of-major requirements, procedures, and policies is available in the School of Social Sciences Undergraduate Student Affairs Office and at http://www.changeofmajor.uci.edu.

Requirements for the B.A. Degree

All students must meet the University Requirements (catalogue.uci.edu/previouseditions/2013-14/informationforadmittedstudents/requirementsforabachelorsdegree).

All students must meet the School Requirements (catalogue.uci.edu/previouseditions/2013-14/schoolofsocialsciences/#undergraduatetext).

Departmental Requirements for the Major in Economics

This major is designed for students seeking a broad education applicable to occupations in business, law, and government or as preparation for graduate school in the social sciences. School requirements must be met and must include 17 courses as specified below.

A. Lower-division:

| ECON 20A-20B | Basic Economics I and Basic Economics II |
| MATH 2A-2B | Single-Variable Calculus and Single-Variable Calculus |
| MATH 4 | Mathematics for Economists |

B. Upper-division:

| ECON 100A-100B-100C | Intermediate Economics I and Intermediate Economic II and Intermediate Economic III |
| ECON 122A | Applied Econometrics I |

C. Six additional ECON courses, one of which may be lower-division.

D. A maximum of three four-unit courses selected from ECON 190–199 may be counted toward the major.

Sample Program — Economics Majors

Freshman

ECON 20A-20B
2 Lower-division writing courses
MATH 2A-2B
2 Soc. Sci. intro. courses
2 General Education

Sophomore

ECON 100A-100B-100C
ECON 15A-15B
Soc. Sci. computer requirement
5 General Education

Junior

ECON 122A
4 Upper-division ECON courses
2 General Education
Electives
Departmental Requirements for the Major in Quantitative Economics

The Department strongly urges students to consider the major in Quantitative Economics, which best prepares them for careers in business and finance, for law school, for M.B.A. programs, and for graduate studies in the social sciences. School requirements must be met and must include 19 courses as specified below.

A. Lower-division:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 20A- 20B</td>
<td>Basic Economics I and Basic Economics II</td>
</tr>
<tr>
<td>MATH 2A- 2B</td>
<td>Single-Variable Calculus and Single-Variable Calculus</td>
</tr>
<tr>
<td>MATH 3A or MATH 6G</td>
<td>Introduction to Linear Algebra or Linear Algebra</td>
</tr>
<tr>
<td>MATH 4</td>
<td>Mathematics for Economists</td>
</tr>
</tbody>
</table>

B. Upper-division:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 105A- 105B- 105C</td>
<td>Intermediate Quantitative Microeconomics and Macroeconomics I and Intermediate Quantitative Microeconomics and Macroeconomics II and Intermediate Quantitative Microeconomics and Macroeconomics III</td>
</tr>
<tr>
<td>STATS 120A- 120B- 120C</td>
<td>Introduction to Probability and Statistics and Introduction to Probability and Statistics and Introduction to Probability and Statistics</td>
</tr>
<tr>
<td>ECON 123A- 123B</td>
<td>Econometrics I and Econometrics II</td>
</tr>
</tbody>
</table>

C. Five additional Economics courses, including at least four four-unit upper-division courses and one that satisfies the upper-division writing requirement. The upper-division electives must include two quantitative electives selected from the list below:

- ECON 107: Economics of Asymmetric Information
- ECON 116A: Game Theory I
- ECON 116B: Game Theory II
- ECON 131A: The Economics of Risk and Uncertainty
- ECON 135: Mathematics of Finance

D. A maximum of three four-unit courses selected from ECON 190-199 may be counted toward the major.

1 Additional courses may be added to this list; up-to-date information is available at http://www.economics.uci.edu/.

Sample Program — Quantitative Economics Majors

Freshman

- ECON 20A- 20B
- 2 Lower-division writing courses
- MATH 2A- 2B
- MATH 3A or 6G
- MATH 4

- 2 Soc. Sci. intro. courses
- 2 General Education

Sophomore

- ECON 105A- 105B- 105C
- STATS 120A- 120B- 120C
- Soc. Sci. computer requirement
- 4 General Education

Junior

- ECON 123A- 123B
- 4 Upper-division ECON courses
- 2 General Education
- Electives

Senior

- 3 Upper-division ECON courses
- Electives
C. Seven additional Economics courses, including at least four four-unit upper-division courses.  
Two of the electives must be selected from following business electives list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 125</td>
<td>Business Forecasting</td>
</tr>
<tr>
<td>ECON 131A</td>
<td>The Economics of Risk and Uncertainty</td>
</tr>
<tr>
<td>ECON 132A</td>
<td>Introduction to Financial Investments</td>
</tr>
<tr>
<td>ECON 134A</td>
<td>Corporate Finance</td>
</tr>
<tr>
<td>ECON 135</td>
<td>Mathematics of Finance</td>
</tr>
<tr>
<td>ECON 142A</td>
<td>Industrial Organization I</td>
</tr>
<tr>
<td>ECON 142B</td>
<td>Industrial Organization II</td>
</tr>
<tr>
<td>ECON 145L</td>
<td>Economics of Law</td>
</tr>
<tr>
<td>ECON 161A</td>
<td>Money and Banking</td>
</tr>
<tr>
<td>ECON 161B</td>
<td>International Money</td>
</tr>
<tr>
<td>ECON 161C</td>
<td>International Trade and Commercial Policy</td>
</tr>
</tbody>
</table>

And two of electives must be selected from the following management electives list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 140</td>
<td>Managerial Economics</td>
</tr>
<tr>
<td>ECON 147A</td>
<td>Corporate Governance</td>
</tr>
<tr>
<td>ECON 147B</td>
<td>Economics of Strategy</td>
</tr>
<tr>
<td>ECON 148</td>
<td>Business Decisions</td>
</tr>
<tr>
<td>ECON 151A</td>
<td>Labor Economics and Human Resources I</td>
</tr>
<tr>
<td>ECON 151B</td>
<td>Labor Economics and Human Resources II</td>
</tr>
<tr>
<td>ECON 165</td>
<td>Economics of International Business</td>
</tr>
</tbody>
</table>

D. A maximum of three four-unit courses selected from ECON 190–199 may be counted toward the major.

Specialization in International Issues and Economics

Students in any of the three Economics majors may complete the specialization in International Issues and Economics. Admission to the specialization requires approval in advance by the Economics Department. The admissions process begins with completing a form at the Department office. This approval should be applied for after the student has completed ECON 20A-ECON 20B, but no later than the end of the junior year.

The specialization requires the completion of the following:

A. Lower-division:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTL ST 11</td>
<td>Global Cultures and Society</td>
</tr>
<tr>
<td>INTL ST 13</td>
<td>Global Economy (or ECON 13)</td>
</tr>
<tr>
<td>INTL ST 14</td>
<td>Introduction to International Relations</td>
</tr>
</tbody>
</table>

B. Three upper-division international Economics elective courses selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 157</td>
<td>Economic Development</td>
</tr>
<tr>
<td>ECON 161B</td>
<td>International Money</td>
</tr>
<tr>
<td>ECON 161C</td>
<td>International Trade and Commercial Policy</td>
</tr>
<tr>
<td>ECON 162</td>
<td>Poverty, Growth, and Development</td>
</tr>
<tr>
<td>ECON 163</td>
<td>Communism in Russia and China</td>
</tr>
<tr>
<td>ECON 164A</td>
<td>The Industrial Revolution in Western Europe</td>
</tr>
<tr>
<td>ECON 165</td>
<td>Economics of International Business</td>
</tr>
</tbody>
</table>

C. Three additional international general education elective courses selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTL ST 11A</td>
<td>Economic Development</td>
</tr>
<tr>
<td>INTL ST 112A</td>
<td>International Business</td>
</tr>
<tr>
<td>INTL ST 120</td>
<td>Global Environmental Issues</td>
</tr>
<tr>
<td>INTL ST 121</td>
<td>Social Ecology of Peace</td>
</tr>
<tr>
<td>INTL ST 122</td>
<td>Nuclear Environments</td>
</tr>
<tr>
<td>INTL ST 179</td>
<td>Regional Topics in International Studies (if focus is on international economy)</td>
</tr>
<tr>
<td>POL SCI 141B</td>
<td>International Political Economy</td>
</tr>
<tr>
<td>POL SCI 141C</td>
<td>International Political Economy of East Asia</td>
</tr>
<tr>
<td>POL SCI 141D</td>
<td>Immigration Politics in Western Europe</td>
</tr>
<tr>
<td>POL SCI 143D</td>
<td>Global Environmental Issues</td>
</tr>
<tr>
<td>POL SCI 143E</td>
<td>Globalization and Its Discontents</td>
</tr>
<tr>
<td>HISTORY 21A</td>
<td>World: Innovations</td>
</tr>
<tr>
<td>HISTORY 21B</td>
<td>World: Empires and Revolutions</td>
</tr>
<tr>
<td>HISTORY 21C</td>
<td>World: Wars and Rights</td>
</tr>
</tbody>
</table>

1 It is strongly recommended that students satisfy the upper-division writing requirement with one of the Economics electives.

Sample Program — Business Economics Majors

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 20A-20B</td>
<td>2 Lower-division writing courses</td>
</tr>
<tr>
<td>MATH 2A-2B</td>
<td></td>
</tr>
<tr>
<td>ECON 25</td>
<td>2 Soc. Sci. intro. courses</td>
</tr>
<tr>
<td></td>
<td>2 General Education</td>
</tr>
</tbody>
</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 100A-100B-100C</td>
<td>5 Soc. Sci. computer requirement</td>
</tr>
<tr>
<td>ECON 15A-15B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 General Education</td>
</tr>
</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 122A-122B</td>
<td>4 Upper-division ECON courses</td>
</tr>
<tr>
<td></td>
<td>2 General Education</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
</tr>
</tbody>
</table>

Senior

3 Upper-division ECON courses

Electives

At most, only one lower-division elective may be taken.
Honors Program in Economics

Undergraduates in any of the three Economics majors may complete the Honors Program in Economics. Entry into the program requires a 3.4 GPA or better in upper-division Economics courses and an overall GPA of 3.2 or better. Undergraduates hoping to enter the program must apply no later than the spring quarter of their junior year. Students in the Honors Program must complete an honors thesis and the two-quarter Economics Honors Colloquium (ECON H190A-ECON 190B; satisfies the upper-division writing requirement).

Economics Minor Requirements

Requirements for the minor in Economics are met by taking nine courses (36 units) as specified below:

A. Core courses (28 units):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 20A-20B</td>
<td>Basic Economics I and Basic Economics II</td>
</tr>
</tbody>
</table>

and select one of the following sequences:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 100A-100B-100C</td>
<td>Intermediate Economics I and Intermediate Economic II and Intermediate Economic III</td>
</tr>
<tr>
<td>ECON 105A-105B-105C</td>
<td>Intermediate Quantitative Microeconomics and Macroeconomics I and Intermediate Quantitative Microeconomics and Macroeconomics II and Intermediate Quantitative Microeconomics and Macroeconomics III</td>
</tr>
</tbody>
</table>

B. Electives (eight units): two upper-division ECON electives (excluding ECON 199).

NOTE: Prerequisites for the Economics core courses include MATH 2A-MATH 2B and MATH 4.

1. MGMT 7 may not be used to substitute for ECON 15A-ECON 15B. Furthermore, students will not receive credit for MGMT 7 if taken after ECON 15A-ECON 15B.

2. Note that ECON 20A-ECON 20B is a requirement of both the undergraduate major in Business Administration and the Economics minor.

3. As noted in the Economics courses list (click on the "Courses" tab at the top of this page), some courses overlap with upper-division courses offered by The Paul Merage School of Business. Where there is overlap, students may use the course to count toward satisfying the upper-division requirements of the Business Administration major or the Economics minor, but not both.

Graduate Program

The Department of Economics offers a Ph.D. degree program in Economics. Drawing upon the School's strong quantitative tradition, it specializes in public choice, transportation economics, urban economics, econometrics, and applied microeconomics. Admission is highly selective and is limited to students whose interests mesh closely with those of the faculty. By requiring a high degree of overlap between faculty and student research interests, the program offers extensive faculty contact within a tutorial framework. Motivated and well-qualified students find the graduate program highly attractive because of its small size and its great flexibility. Self-discipline and an inquiring mind are prerequisites.

Admission

The deadline for application for admission is January 15 for fall quarter. Students are admitted for winter or spring quarters only under exceptional circumstances. Late applications are considered on a space-available basis. All applicants must take the Graduate Record Exam (GRE) prior to the application deadline. Applicants whose primary language is not English must also submit Test of English as a Foreign Language (TOEFL) scores. To be considered for any financial aid (including a teaching assistantship), students who are not citizens of countries where English is either the primary or dominant language as approved by the UCI Graduate Council must submit a passing score from the Test of Spoken English (TSE).

Requirements

All students must show competence in the core areas of microeconomics, macroeconomics, and econometrics. This is done by taking the three-quarter required course sequences in microeconomics, macroeconomics, and econometrics, with no grade lower than a B and with a grade point average across these courses of at least 3.25. The Department may also require students to pass a written qualifying exam in one or more of the core course sequences after taking the courses.

Students take the oral candidacy examination based on their research. A well-prepared student should take this oral examination at the end of the second year.

Students also must master two fields of economics by taking a two-course sequence (possibly including independent reading courses) and writing a research paper in each field. Students also must enroll for at least four quarters in the graduate colloquium, in which attendance at regular Economics faculty research colloquia is supplemented by discussion of the papers presented and additional reading. Students are encouraged to become conversant with areas of current economic research early in their graduate careers, in order to facilitate a timely transition from meeting course and field requirements to thinking through a dissertation research plan.

Two or three quarters before the expected completion of the dissertation, the dissertation committee will organize an oral examination of the candidate’s dissertation prospectus. Ordinarily, the prospectus will describe in detail the dissertation, and will typically be accompanied by at least one completed chapter of the dissertation.

Students are expected to complete their dissertation by the end of their fifth year. The maximum time permitted for completion of the Ph.D. is six years.

Concentration in Transportation Economics

Students can also pursue a Ph.D. in Economics with a concentration in Transportation Economics. This option draws upon the transportation researchers on the campus within the School of Social Sciences, The Henry Samueli School of Engineering, The Paul Merage School of Business, and the School of Social Ecology. Students benefit from association with the Institute of Transportation Studies, which facilitates...
student research by providing research assistantships and interdisciplinary seminars on all modes of transportation.

Requirements for the concentration are the same as those described above with the following three exceptions:

1. Instead of the third quarter of microeconomics and macroeconomics, students may substitute specified courses such as Discrete Choice Econometrics (ECON 223A), Travel Demand Analysis I (ENGRCEE 220A), or Management Science (MGMT MBA 201B);

2. One of the student’s two required fields of competence must be transportation economics; the other must be a related field such as urban economics, labor economics, industrial organization, or a transportation-related field from outside economics (such as travel demand and flow theory, urban and transportation policy analysis, environmental impacts of transportation, or urban and transportation planning) subject to the approval of the Director of Graduate Studies for Economics; and

3. Students must take at least one additional course from a list of designated courses in transportation and related subject areas.

Concentration in Public Choice

Students can also pursue a Ph.D. degree in Economics with a concentration in Public Choice. This is an interdisciplinary field, at the intersection of Economics and Political Science, which draws on quantitative tools to model the functioning of political institutions. Faculty from the Departments of Economics, Political Science, and Logic and Philosophy of Science and from The Paul Merage School of Business are involved in research that supports the concentration.

Students who elect this concentration are admitted under the normal procedures for the program in Economics and must fulfill all the requirements for the Economics degree with the following modifications:

1. One of the student’s two required fields of competence must be public choice; included is a three-quarter core course in public choice, ECON 270A-ECON 270B-ECON 270C, which is jointly organized by faculty in the Departments of Economics and Political Science. (A background in economic theory is a prerequisite to this sequence.) The requirement for competence in a second field may be met with a one-quarter course, instead of two, if it provides sufficient fluency in the field; and

2. Students must obtain a background knowledge in political science equivalent to that provided by a one-year undergraduate survey course, if they do not already have it.

Program in Law and Graduate Studies (J.D./Ph.D.)

Highly qualified students interested in combining the study of law with graduate research and/or professional qualifications in Economics are invited to undertake concurrent degree study under the auspices of UC Irvine’s Program in Law and Graduate Studies (PLGS). Students in this program pursue a coordinated curriculum leading to a J.D. degree from the School of Law in conjunction with a Ph.D. degree in Economics. Additional information is available from the PLGS Program Director’s office, (949) 824-4158, or by e-mail to plgs@law.uci.edu. A full description of the program, with links to all relevant application information, can be found at http://www.law.uci.edu/plgs.

Research Facilities

UCI is a major research university and has an excellent library that offers in electronic and print formats more than 3.2 million volumes, as well as special interlibrary loan arrangements with the other University of California libraries. The School of Social Sciences provides computer rooms, conference rooms, and offices for graduate students. The Economics Department has a small library with current journals and unpublished working papers from other universities. Students also have access to advanced computing resources as well as PC and UNIX laboratories.

Currently, there are four research units that provide excellent research opportunities for Economics graduate students: the Institute of Transportation Studies, the Center for Research on Information Technology and Organizations, the Institute for Mathematical Behavioral Sciences, and the Center for Economics & Public Policy (CEPP), established in 2011, which seeks to improve analysis, formulation, and debate on economics-related public policy issues at the international, national, state, and local levels.

Participating Faculty

Duran Bell: Models of social processes

Marianne Bitler: Labor economics, econometrics, microeconomics, and health economics

Dan Bogart: Economic history, institutions, infrastructure and economic development

William A. Branch: Macroeconomics

David Brownstone: Econometrics and transportation economics

Jan K. Brueckner: Urban economics, public economics, industrial organization, and housing finance

Jean-Paul Carvalho: Game theory, political economy, culture and identity

Jiawei Chen: Industrial organization, econometrics, finance

Linda R. Cohen: Political economy, social choice, government regulation, and government policy toward research and development

Art Devany: Economic theory, political economy, culture and identity

Yingying Dong: Applied econometrics, labor and health

Gordon J. Fielding: Urban and transportation economics

Michelle R. Garfinkel: Macroeconomics, political economy and conflict

Amihai Glazer: Political economy

Ivan Jeliazkov: Theoretical and applied econometrics, Bayesian inference, Markov chain Monte Carlo, computation in social sciences

Igor Kopylov: Microeconomics, decision theory, game theory

Michael McBride: Microeconomics, game theory, political economy

Martin C. McGuire: Public finance, international trade, economics of peace and security

Duran Bell: Models of social processes

David Neumark: Labor economics
Courses

**ECON 1. Introduction to Economics. 4 Units.**
An analysis of the problems society faces in organizing itself to provide goods and services. How decisions of government, business, and the individual relate to current economic problems such as unemployment, inflation, poverty, and environmental pollution.

Restriction: Non-Economics majors only.

**ECON 11. The Internet and Public Policy. 4 Units.**
How the Internet works. Current public policy issues concerning the Internet. Introductory economics. Communications law. Interactions between information technology, economics, and law. Case studies about Internet and communications policy.

Same as I&C SCI 11.

**ECON 12. Federal Reserve: Past, Present, and Future. 4 Units.**
Studies central banking in the United States from colonial times to the present. Focuses on the past, present, and future of the Federal Reserve and precursors to that system, which was established in 1913.

**ECON 13. Global Economy. 4 Units.**
Acquaints students with the fundamental patterns of the global economy. Emphasizes the historical roots and political implications of economic choices.

Same as INTL ST 13.

Restriction: International Studies, Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

**ECON 15A. Probability and Statistics in Economics I. 4 Units.**
An introduction to probability, statistics, and econometrics. Emphasis on a thorough understanding of the probabilistic basis of statistical inference. Examples from economics. Management 7 may not be used to substitute for Economics 15A-B.

Prerequisite: MATH 2A and MATH 2B and MATH 4.

Restriction: No credit for MGMT 7 if taken after ECON 15A and ECON 15B. Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

**ECON 15B. Probability and Statistics in Economics II. 4 Units.**
An introduction to probability, statistics, and econometrics. Emphasis on a thorough understanding of the probabilistic basis of statistical inference. Examples from economics. Management 7 may not be used to substitute for Economics 15A-B.

Prerequisite: MATH 2A and MATH 2B and MATH 4.

Restriction: No credit for MGMT 7 if taken after ECON 15A OR 15B. Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
ECON 17. An Economic Approach to Religion. 4 Units.
Introduction to how basic economic concepts such as demand, supply, consumption, production, competition, free-riding, innovation, regulation, and rent-seeking can be applied to understand observed religious behavior.

Same as REL STD 17.

ECON 20A. Basic Economics I. 4 Units.
The fundamentals of microeconomics. The behavior of firms and consumers: markets, supply/demand, utility maximization, resource allocation, and efficiency. Course may be offered online.

Overlaps with ECON 23.

ECON 20B. Basic Economics II. 4 Units.
The fundamentals of macroeconomics. Government behavior: monetary and fiscal policy, inflation, and unemployment. Effective fall 2006, the content of Economics 20B is macroeconomics. This course cannot be taken to repeat Economics 20B taken prior to fall 2006. Course may be offered online.

Prerequisite: ECON 20A or ECON 13.

ECON 23. Basic Economics for Engineers. 4 Units.
The fundamentals of microeconomics. The behavior of firms and of consumers: markets, supply/demand, utility maximization, resource allocation, and efficiency.

Overlaps with ECON 20A.

ECON 25. The Economics of Accounting Decisions. 4 Units.
Introduction to accounting concepts and principles, including the accounting model and accounting style, transaction analysis, and preparation of financial statements. An analysis of the similarities and differences between accounting and economic concepts (e.g., value, profits).

Prerequisite: ECON 20A.

Overlaps with MGMT 30A.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 26A. Managerial Accounting. 4 Units.
An introduction to the fundamentals of management accounting, including the study of terms and concepts, comparisons of different costing systems, analysis of cost-volume profit relationships, preparation of information for planning, control, and evaluation of performance, and decision analysis.

Prerequisite: MATH 2A and MATH 2B and MATH 4.

Overlaps with MGMT 30B.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 100A. Intermediate Economics I. 4 Units.
Determinants of supply and demand; operation of competitive and monopolistic markets; imperfections of the market system, explanations of unemployment, inflation, recessions; public policy for macroeconomic problems.

Prerequisite: ECON 20A and ECON 20B and MATH 2A and MATH 2B.

Overlaps with ECON 105A.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 100B. Intermediate Economics II. 4 Units.
Determinants of supply and demand; operation of competitive and monopolistic markets; imperfections of the market system, explanations of unemployment, inflation, recessions; public policy for macroeconomic problems.

Prerequisite: ECON 100A.

Overlaps with ECON 105B.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 100C. Intermediate Economics III. 4 Units.
Determinants of supply and demand; operation of competitive and monopolistic markets; imperfections of the market system, explanations of unemployment, inflation, recessions; public policy for macroeconomic problems.

Prerequisite: ECON 100B.

Overlaps with ECON 105C.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 105A. Intermediate Quantitative Microeconomics and Macroeconomics I. 4 Units.
An advanced and mathematical version of Economics 100A-B-C for students in the Quantitative Economics major.

Prerequisite: ECON 20A and ECON 20B and MATH 2A and MATH 2B and MATH 3A and MATH 4.

Overlaps with ECON 100A.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 105B. Intermediate Quantitative Microeconomics and Macroeconomics II. 4 Units.
An advanced and mathematical version of Economics 100A-B-C for students in the Quantitative Economics major.

Prerequisite: ECON 105A.

Overlaps with ECON 100B.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
ECON 105C. Intermediate Quantitative Microeconomics and Macroeconomics III. 4 Units.
An advanced and mathematical version of Economics 100A-B-C for students in the Quantitative Economics major.
Prerequisite: ECON 105B.
Overlaps with ECON 100C.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 107. Economics of Asymmetric Information. 4 Units.
Focuses on the effects of asymmetric information in the markets for traditional economic goods and resources, such as labor, insurance, used cars, credit, and in auctions and bargaining problems. Prerequisite:
Prerequisite: ECON 100A or ECON 105A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 109. Special Topics in Economic Theory. 4 Units.
Studies in selected areas of Economics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: May be repeated for credit unlimited times.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 115. Behavioral Economics. 4 Units.
Studies the behavioral and psychological biases in economics settings. Both individual decisions and games are discussed.
Prerequisite: ECON 20A and ECON 20B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 116A. Game Theory I. 4 Units.
Extensive form games with perfect information, and coalitional games. The key solution concepts are Nash Equilibrium, Backward Induction, and the Core. Substantive examples include public good production, oligopoly, electoral competition, auctions, holdup, market entry, and voting.
Prerequisite: ECON 15A and ECON 15B and (ECON 100A or ECON 105A).
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 116B. Game Theory II. 4 Units.
Two-quarter sequence on game theory. Bayesian games, extensive form games with imperfect information, zero-sum games.
Prerequisite: ECON 116A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 117. Experimental Economics. 4 Units.
Students will learn what constitutes proper experimental design and what laboratory experiments teach us about human behavior and the economy. Students will participate in a sample experiment, evaluate the results, and discuss experiment design and larger issues.
Prerequisite: ECON 15B and ECON 100B.

ECON 122A. Applied Econometrics I. 4 Units.
Introduction to econometrics emphasizing practical applications in microeconomics and macroeconomics.
Prerequisite: (ECON 15A and ECON 15B) or (MATH 130B or MATH 133A) or (MATH 131C or STATS 120C) and ECON 20A and ECON 20B.
Overlaps with ECON 123A, ECON 123B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 122B. Applied Econometrics II. 4 Units.
Introduction to econometrics emphasizing practical applications in microeconomics and macroeconomics.
Prerequisite: ECON 122A.
Overlaps with ECON 123B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 122CW. Data Analysis Writing. 4 Units.
Research writing course in econometrics focusing on individual research projects. Students employ econometric analysis to address an economic question in a 20-page paper and present their findings to the class in a short presentation.
Prerequisite: ECON 15A and ECON 15B and ECON 122A and ECON 122B. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 123A. Econometrics I. 4 Units.
Specification, estimation, and testing of econometric models. Applications in various areas of microeconomics and macroeconomics.
Prerequisite: (MATH 2A and MATH 2B and MATH 4) or (MATH 3A and STATS 120A and STATS 120B and (STATS 120C or MATH 131C)) and ((ECON 100A and ECON 100B and ECON 100C) or (ECON 105A and ECON 105B and ECON 105C)).
Overlaps with ECON 122A, ECON 122B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
ECON 123B. Econometrics II. 4 Units.
Specification, estimation, and testing of econometric models. Applications in various areas of microeconomics and macroeconomics.
Prerequisite: ECON 123A
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 123C. Econometrics III. 4 Units.
Seminar course in which students do an original econometric research project.
Prerequisite: ECON 123B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 123CW. Econometrics III. 4 Units.
Seminar course in which students do an original econometric research project.
Prerequisite: ECON 123B. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
(Ib)

ECON 124. Advances in Econometrics I. 4 Units.
Aims to supplement the training in econometrics for students who have completed either Economics 122A-B or 123A-B-C by covering chapters in the two texts used in these sequences which were not covered.
Prerequisite: (ECON 122A and ECON 122B) or (ECON 123A and ECON 123B).

ECON 125. Business Forecasting. 4 Units.
Students learn how to produce forecasts of the behavior of economic (and other) variables. The techniques examined are linear regression, nonlinear regression, and nonparametric kernel regression, AR, MA, ARMA, ARIMA, and Box-Jenkins.
Prerequisite: ECON 15A and ECON 15B and ECON 20A and ECON 20B.
Overlaps with MGMT 109.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 129. Special Topics in Quantitative Methods. 4 Units.
Studies in selected areas of Quantitative Methods. Topics addressed vary each quarter.
Repeatability: Unlimited as topics vary.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 131A. The Economics of Risk and Uncertainty. 4 Units.
The theory of insurance and joint-ownership of risky enterprises; optimal procedures for the allocation of uncertain payoffs.
Prerequisite: ECON 15A and ECON 15B and ((ECON 100A and ECON 100B) or (ECON 105A and ECON 105B) or (MATH 131A and MATH 131B and STATS 120A and STATS 120B and STATS 120C) or (MATH 130B or MATH 133A or MATH 131C)).
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 132A. Introduction to Financial Investments. 4 Units.
Modern theories of investment and their application to the study of financial markets. The relation between risk and return, diversification, asset pricing, efficient markets hypothesis, and the market valuation of stocks, bonds, options, and futures.
Prerequisite: (ECON 15A and ECON 15B and ECON 100A and ECON 100B and ECON 100C) or (ECON 105A and ECON 105B and ECON 105C) or (MATH 131A and MATH 131B and STATS 120A and STATS 120B and STATS 120C) or (MATH 130B or MATH 133A or MATH 131C). Prerequisite or corequisite: ECON 100C or ECON 105C.
Overlaps with MGMT 141.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 134A. Corporate Finance. 4 Units.
Provides an overview of the modern theory and practice of corporate finance and focuses on two fundamental financial decisions; investment as well as financing. Beginning with discounted cash flow analysis, basic theory will be applied to the valuation of stocks.
Prerequisite: ((ECON 100A and ECON 100B and ECON 100C) or (ECON 105A and ECON 105B and ECON 105C)) and MATH 131A and MATH 131B and STATS 120A and STATS 120B and STATS 120C.
Overlaps with MGMT 109.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 135. Mathematics of Finance. 4 Units.
After reviewing tools from probability, statistics, and elementary differential and partial differential equations, concepts such as hedging, arbitrage, Puts, Calls, the design of portfolios, the derivation and solution of the Black-Scholes, and other equations are discussed.
Prerequisite: MATH 3A.
Same as MATH 176.
Restriction: Mathematics, Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
ECON 139. Special Topics in Financial Economics. 4 Units.
Studies in selected areas of Financial Economics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 140. Managerial Economics. 4 Units.
A collection of concepts and methods for effective decision making. Explores how the tools of microeconomics, including game theory and industrial organization theory, can be used to make better managerial decisions, particularly those involving allocation of resources within firms.
Prerequisite: ECON 100A and ECON 100B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 141B. Public Economics II. 4 Units.
Theory of public goods, externalities, voting models, analysis of bureaucracy, the Tiebout model, income redistribution, intergovernmental grants.
Prerequisite: (ECON 100A and ECON 100B) or ECON 105A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 142A. Industrial Organization I. 4 Units.
The theory of market structure. Imperfect markets, government policies and industry performance.
Prerequisite: (ECON 15A and ECON 15B and ECON 100A and ECON 100B) or (ECON 105A and ECON 105B).
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 142B. Industrial Organization II. 4 Units.
Regulation and antitrust theory and performance in industries.
Prerequisite: (ECON 15A and ECON 15B and ECON 100A and ECON 100B) or (ECON 105A and ECON 105B).
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 142CW. Industrial Organization III. 4 Units.
Research in industrial organization. Satisfies the upper-division writing requirement and the honors research requirement.
Prerequisite: ECON 100A and ECON 100B and ECON 110A and ECON 110B and ECON 110C. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 143. Energy Economics. 4 Units.
The economics of markets for oil, natural gas, electricity, renewable energy and their interactions with each other and the rest of the economy. Effects of government intervention, policy measures, economic policy issues arising between energy use and the environment.
Prerequisite: (ECON 100A and ECON 100B and ECON 100C) or ECON 105A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 144A. Urban Economics I. 4 Units.
Why cities exist, economics of urban land-use, housing demand and tenure choice, urban amenities.
Prerequisite: ECON 20A and ECON 20B and ECON 15A and ECON 15B. Recommended: ECON 100A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 144B. Urban Economics II. 4 Units.
Economics of traffic congestion, housing policy analysis, Third World urbanization, urban public goods and services, crime, neighborhood effects.
Prerequisite: ECON 20A and ECON 20B. Recommended: ECON 100A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 144CW. Urban Economics III. 4 Units.
Allows students to apply knowledge of urban economics in the conduct of individual research.
Prerequisite: ECON 20A and ECON 20B. Recommended: ECON 100A. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 145. Health Economics. 4 Units.
Considers why some people are healthier than others, why health outcomes differ across countries, the problems of moral hazard and of adverse selection that appear in health insurance, and how hospitals and physicians behave.
Prerequisite: ECON 100A.

ECON 145E. Economics of the Environment. 4 Units.
Surveys economic aspects of natural resources, pollution, population, and the environment. Examines the causes of pollution; analysis of public policies regarding these problems. Emphasis on microeconomic aspects of environmental problems.
Prerequisite: ECON 15A and ECON 15B and ECON 122A and (ECON 100A and ECON 100B) or ECON 105A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
ECON 145FW. Economics of the Environment II. 4 Units.
Applications of the tools covered in Economics 145E to such topics as global warming, destruction of the ozone layer, and emissions trading. Emphasis on independent research papers. Syllabus and classes include writing technique.
Prerequisite: ECON 145E and ECON 15A and ECON 15B. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 145L. Economics of Law. 4 Units.
Examination of several economic concepts which are useful in understanding legal rules: externalities, the assignment of property rights, and Coase’s theorem. Examples are drawn from the fields of pollution control, no-fault insurance, medical malpractice, and product liability.
Prerequisite: (ECON 100A and ECON 100B) or ECON 105A. Prerequisite or corequisite: ECON 100B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 147A. Corporate Governance. 4 Units.
Studies topics in the internal organization of firms, including rent seeking, incentive contracts, principal-agent problems, internal labor markets, contests, and herd behavior.
Prerequisite: ECON 100A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 147B. Economics of Strategy. 4 Units.
Uses of tools of economics, game theory in particular, to develop an understanding of business decision making. Deals with questions such as how the firm decides what kind of business to be in, how large should it be, and others.
Prerequisite: (ECON 100A and ECON 100B and ECON 100C) or ECON 105A.
Overlaps with MGMT 110, MGMT 168.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 148. Business Decisions. 4 Units.
Surveys normative and descriptive models of decision-making behavior, with an emphasis on organizational and policy contexts. Topics include rational choice theory, biases and heuristics, framing effects, and overconfidence. Management fads, panics, and herd behavior are also discussed.
Prerequisite: (ANTHRO 10A and ANTHRO 10B and ANTHRO 10C) or (SOCIOL 10A and SOCIOL 10B and SOCIOL 10C) or (SOC SCI 10A and SOC SCI 10B and SOC SCI 10C) or (MATH 2A and MATH 2B and (STATS 7 or MGMT 7)).
Same as SOCIOL 138.
Restriction: Sociology majors have first consideration for enrollment.

ECON 149. Special Topics in Economics of Public and Private Organizations. 4 Units.
Studies in selected areas of Economics of Public and Private Organizations. Topics addressed vary each quarter.
Repeatability: Unlimited as topics vary.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 151A. Labor Economics and Human Resources I. 4 Units.
Labor demand, labor supply, human capital, personnel economics, and other topics.
Prerequisite: ECON 15A and ECON 15B and ECON 100A and ECON 100B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 151B. Labor Economics and Human Resources II. 4 Units.
Labor market discrimination, compensating wage differentials, immigration, and other topics.
Prerequisite: ECON 151A.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 151C. Labor Economics and Human Resources III. 4 Units.
Original research by students.
Prerequisite: ECON 151B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 151CW. Labor Economics and Human Resources III. 4 Units.
Original research by students.
Prerequisite: ECON 151B. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.
ECON 152A. Economic Anthropology. 4 Units.
Economic systems in comparative perspective: production, distribution, and consumption in market and non-market societies; agricultural development in the third world.

Prerequisite: One course in general science, anthropology, economics, geography, or sociology.

Same as ANTHRO 125A.

Restriction: Economics, Quantitative Economics, Business Economics, and Anthropology majors have first consideration for enrollment.

ECON 153W. Political Institutions, Legal Systems, and Economic Development. 4 Units.
Studies a variety of empirical papers analyzing how institutions affect economic development. The topics include cross-country studies of institutions as well as narrower topics such as corruption, regulation of entry, political connections, and pork barrel politics.

Prerequisite: ECON 15A and ECON 15B and ECON 100A and ECON 100B and ECON 100C and ECON 122A. Satisfactory completion of the lower-division writing requirement.

ECON 157. Economic Development. 4 Units.
Considers the process of economic development across the globe and why some countries are rich and others poor. Discusses the major problems facing developing countries, such as population growth, education, capital formation, environmental protection, and international trade.

Prerequisite: ECON 20A and ECON 20B.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 158. Economics of Education. 4 Units.
Arms students with tools, concepts, and evidence that can be used to analyze complex policy questions in education, enabling students to arrive at their own reasoned judgments about how to improve education.

Prerequisite: ECON 15A and ECON 100A.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 158W. Economics of Education. 4 Units.
Arms students with tools, concepts, and evidence that can be used to analyze complex policy questions in education, enabling students to arrive at their own reasoned judgments about how to improve education.

Prerequisite: ECON 15A and ECON 100A. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 159. Special Topics in Economics in Human Resources. 4 Units.
Studies in selected areas of Economics in Human Resources. Topics addressed vary each quarter.

Repeatability: Unlimited as topics vary.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 161A. Money and Banking. 4 Units.
Basic elements of money and banking: institutional features and economics of financial markets and, in particular, the U.S. banking system; determinants of interest rates; the Federal Reserve and its role in money supply; effects of money on output and inflation.

Prerequisite: (ECON 100A and ECON 100B) or (ECON 105A and ECON 105B). Prerequisite or corequisite: ECON 100C OR 105C.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 161B. International Money. 4 Units.
Open economy macroeconomics and determination of exchange rates. Asset-market approach to the balance of payments. Internal and external balance in the economy. Macroeconomic policies under fixed and floating exchange rates. The international monetary system and institutions.

Prerequisite: ECON 100A and ECON 100B. Prerequisite or corequisite: ECON 100C.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 161C. International Trade and Commercial Policy. 4 Units.
Determination of trade flows and the relative prices. Gains from trade, the terms of trade, and income distribution. Imperfect competition and international trade. The effect of tariffs, export subsidies, and import quotas. The effects of free and restricted trade.

Prerequisite: ECON 100A or ECON 105A.

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 161D. Advanced Money and Banking. 4 Units.
Studies business cycles in the United States during the last century. The first portion of the course reviews the theoretical models employed to study economic fluctuations and empirical methods used to measure fluctuations.

Prerequisite: ECON 15A and ECON 15B and ((ECON 100A and ECON 100B and ECON 100C) OR (ECON 105A and ECON 105B and ECON 105C)).

Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 162. Poverty, Growth, and Development. 4 Units.
Examines India as a case study for each of the topics studied: growth experience of India along with its poverty eradication record and aspects of poverty and the polices that have been undertaken to tackle poverty.

Prerequisite: ECON 15A and ECON 15B and ECON 100A and ECON 100B and ECON 100C.
ECON 163. Communism in Russia and China. 4 Units.
Examines the politics, economics, and history of revolutionary Marxism during the twentieth century. Begins by discussing the theoretical foundation of communism and then contrasting those theories with actual institutions established in communist nations and with socialist, capitalist, and democratic systems.
Prerequisite: ECON 20A and ECON 20B and ECON 20C.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 164A. The Industrial Revolution in Western Europe. 4 Units.
How do economists explain the process of economic development during the past three centuries? How has the process of industrialization affected living standards? In focusing on these questions, students will learn how to apply economic theory and quantitative methods.
Prerequisite: ((ECON 100A and ECON 100B and ECON 100C) or (ECON 105A and ECON 105B and ECON 105C)) and ECON 122A and ECON 122B.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 164AW. The Industrial Revolution in Western Europe. 4 Units.
How do economists explain the process of economic development during the past three centuries? How has the process of industrialization affected living standards? Focusing on these questions, students will learn how to apply economic theory and quantitative methods.
Corequisite: ECON 100C.
Prerequisite: ECON 100C or ECON 105C. Prerequisite or corequisite: ECON 100C. Satisfactory completion of the Lower-Division Writing requirement.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 165. Economics of International Business . 4 Units.
Students learn to understand and analyze the principal economic issues in the international business arena. Covers topics such as trade theory, foreign direct investment, foreign exchange market, and strategy of international business.
Prerequisite: ECON 100C.

ECON 169. Special Topics in Development Economics. 4 Units.
Studies in selected areas of Development Economics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.
Restriction: Economics, Quantitative Economics, and Business Economics majors have first consideration for enrollment.

ECON 190. Senior Thesis. 4 Units.
Students work with faculty to complete their honors thesis.
Repeatability: May be taken for credit 3 times.

ECON 190BW. Economics Honors Colloquium II. 4 Units.
Colloquium required for honors students in Economics, Quantitative Economics, and Business Economics. Introduces students to independent research. Helps students plan a research program. Students complete their thesis.
Prerequisite: Satisfactory completion of the Lower-Division Writing requirement. Must be enrolled in the honors program in Economics.

ECON H190A. Economics Honors Colloquium I. 4 Units.
Colloquium required for honors students in economics, quantitative economics, and business economics. Introduces students to independent research. Helps students plan a research program. Prepares students for thesis writing.
Prerequisite: Satisfactory completion of the Lower-Division Writing requirement. Must be enrolled in the honors program in economics.

ECON 192. Tutoring in Economics. 2 Units.
Enrollment limited to participants in the Economics Peer Tutoring Program. No more than eight units earned in this course may be counted toward the 180 units required for graduation. Satisfies no degree requirement other than contribution to the 180-unit total.
Repeatability: May be taken for credit 4 times.

ECON 197. Field Study. 4 Units.
Not listed in Catalogue.
Repeatability: Unlimited as topics vary.
Restriction: Authorization required or Enrollment by add card only

ECON 198. Directed Group Study. 4 Units.
Not listed in Catalogue.
Repeatability: Unlimited as topics vary.
Restriction: Authorization required or Enrollment by add card only

ECON 199. Independent Study. 1-5 Units.
Independent research with Economics faculty.
Repeatability: May be repeated for credit unlimited times.

ECON 200A. Graduate Colloquium for Economics I. 2 Units.
Weekly reports and colloquia by faculty, students, and visitors. Supplemented by class discussion of these presentations and other material on current research methodology.
Repeatability: May be repeated for credit unlimited times.
Restriction: Economics graduate students only.

ECON 200B. Graduate Colloquium for Economics II. 2 Units.
Weekly reports and colloquia by faculty, students, and visitors. Supplemented by class discussion of these presentations and other material on current research methodology.
Prerequisite: ECON 200A.
Repeatability: May be repeated for credit unlimited times.
Restriction: Economics graduate students only.
ECON 200C. Graduate Colloquium for Economics III. 2 Units.
Weekly reports and colloquia by faculty, students, and visitors. Supplemented by class discussion of these presentations and other material on current research methodology.
Prerequisite: ECON 200B.
Repeatability: May be repeated for credit unlimited times.
Restriction: Economics graduate students only.

ECON 202. Probability and Statistics. 4 Units.
Provides lectures on probability theory and the beginning of mathematical statistics (continued in ECON 220A-ECON 221A) necessary to prepare students for the required econometrics sequence. Topics include probability, distributions, mathematical expectation, sampling, and point estimation.
Restriction: Graduate students only.

ECON 203A. Mathematics for Economists. 4 Units.
Gives students the mathematical background required for graduate work in economics. Topics covered include multivariate calculus, differential equations, and linear algebra.
Restriction: Graduate students only.

ECON 205A. Research Writing in Economics. 4 Units.
For Economics graduate students who are writing their required research paper in an applied field. How to write an original paper in economics. Guidance for specific papers.
Restriction: Economics graduate students only.

ECON 210A. Microeconomic Theory I. 4 Units.
Theoretical microeconomics. Emphasis on the meaning and empirical interpretation of theoretical models. Topics include theory of the firm, theory of the market, theory of the consumer, duality theory, application to econometrics, general equilibrium and welfare economics, uncertainty, game theory.
Restriction: Graduate students only.

ECON 210B. Microeconomic Theory II. 4 Units.
Theoretical microeconomics. Emphasis on the meaning and empirical interpretation of theoretical models. Topics include theory of the firm, theory of the market, theory of the consumer, duality theory, application to econometrics, general equilibrium and welfare economics, uncertainty, game theory.
Prerequisite: ECON 210A.
Restriction: Graduate students only.

ECON 210C. Microeconomic Theory III. 4 Units.
Theoretical microeconomics. Emphasis on the meaning and empirical interpretation of theoretical models. Topics include theory of the firm, theory of the market, theory of the consumer, duality theory, application to econometrics, general equilibrium and welfare economics, uncertainty, game theory.
Prerequisite: ECON 210B.
Restriction: Graduate students only.

ECON 210D. Macroeconomic Theory I. 4 Units.
Advanced macroeconomic theory including alternative macroeconomic models, microeconomic foundations of macroeconomics, investment and growth theory, inflation and unemployment, rational expectations and macroeconomic policy, wealth effects, crowding out and fiscal policy, money and interest, open economy models.
Restriction: Graduate students only.

ECON 210E. Macroeconomic Theory II. 4 Units.
Advanced macroeconomic theory including alternative macroeconomic models, microeconomic foundations of macroeconomics, investment and growth theory, inflation and unemployment, rational expectations and macroeconomic policy, wealth effects, crowding out and fiscal policy, money and interest, open economy models.
Corequisite: ECON 211L.
Prerequisite: ECON 210D.
Restriction: Graduate students only.

ECON 210F. Macroeconomic Theory III. 4 Units.
Advanced macroeconomic theory including alternative macroeconomic models, microeconomic foundations of macroeconomics, investment and growth theory, inflation and unemployment, rational expectations and macroeconomic policy, wealth effects, crowding out and fiscal policy, money and interest, open economy models.
Prerequisite: ECON 210E.
Restriction: Graduate students only.

ECON 211L. Macroeconomics Theory II Lab. 2 Units.
Overview of stochastic processes; introduction to dynamic programming; two equilibrium concepts; Ricardian equivalence; real business cycle model; complete versus incomplete markets; asset pricing and the equity premium puzzle.
Corequisite: ECON 210E.
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Graduate students only.

ECON 219. Special Topics in Economic Theory. 2-4 Units.
Studies in selected areas of Economic Theory. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.

ECON 220A. Statistics & Econometrics I. 4 Units.
Covers probability mathematical statistics necessary to prepare students for econometric study and empirical work. Topics include probability theory, distributions, sampling, and classical point estimation. A likelihood perspective is emphasized.
Restriction: Grad students only or Consent of instructor to enroll
ECON 220B. Statistics & Econometrics II. 4 Units.
Begins with Bayesian point estimation. Then covers interval estimation and hypothesis testing from both classical and Bayesian perspectives, followed by a general discussion of prediction. Finally, all these techniques are applied to the standard linear regression model under ideal conditions, and Generalized Least Squares (GLS) is introduced.
Prerequisite: ECON 220A
Restriction: Prerequisite required and (Grad students only or Consent of instructor to enroll)

ECON 220C. Statistics & Econometrics III. 4 Units.
Begins by relaxing the ideal conditions of the standard regression model. Potential topics include kernel density estimation, instrumental variables (IV), two stage least squares (2SLS), panel data models, and simulation-based Bayesian methods, including Gibbs sampling, the bootstrap, econometric time series, discrete choice and count models, sample selection, and duration models. Covers both Bayesian and classical asymptotic methods.
Prerequisite: ECON 220B and SOC SCI 213A
Restriction: Prerequisite required and Grad students only

ECON 221A. Statistics and Econometrics Laboratory I. 2 Units.
Discussion of problems in statistics and econometrics, and their relationships to statistical and econometrics theory. Instruction in the use of computers for applied econometric work.
Corequisite: ECON 220A.

ECON 221B. Statistics and Econometrics Laboratory II. 2 Units.
Discussion of problems in statistics and econometrics, and their relationships to statistical and econometrics theory. Instruction in the use of computers for applied econometric work.
Corequisite: ECON 220B.

ECON 221C. Statistics and Econometrics Laboratory III. 2 Units.
Discussion of problems in statistics and econometrics, and their relationships to statistical and econometrics theory. Instruction in the use of computers for applied econometric work.
Corequisite: ECON 220C.

ECON 222. Replication and Applied Economics Writing. 4 Units.
Before the course begins, students choose a published empirical economics article and obtain the necessary data to replicate it. Students will replicate and extend the economic analysis and write a paper describing their work.
Prerequisite: ECON 220A and ECON 220B and ECON 220C.

ECON 223A. Discrete Choice Econometrics. 4 Units.
Specification, estimation, and testing of discrete choice models, with emphasis on cross-sectional and panel data models and applications. Students use computer packages to apply models and techniques to real data.
Prerequisite: ECON 220A and ECON 220B and ECON 220C and ECON 220D.

ECON 224A. Time Series Econometrics. 4 Units.
Econometric analysis of time series data. Moving average and autoregressive series, regression analysis, Box-Jenkins techniques, computational methods, and causality conditions.
Prerequisite: ECON 220A and ECON 220B and ECON 220C and ECON 220D.

ECON 229. Special Topics in Social Dynamics Seminar. 4 Units.
Studies in selected areas of Social Dynamics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.

ECON 231A. Institutions in Historical Perspective I. 4 Units.
Investigates economic and political institutions across the world and throughout history. Focuses on institutions such as property rights, political regimes, regulations, legal systems, corporate organization, and social norms.
Prerequisite: ECON 210A and ECON 210B and ECON 210C and ECON 210D and ECON 210E and ECON 210F.

ECON 231B. Institutions in Historical Perspective II. 4 Units.
Investigates economic and political institutions across the world and throughout history. Focuses on institutions such as property rights, political regimes, regulations, legal systems, corporate organization, and social norms.
Prerequisite: ECON 210A and ECON 210B and ECON 210C and ECON 210D and ECON 210E and ECON 210F.

ECON 232. Business Cycles in Historical Perspective. 4 Units.
Investigates business cycles in the United States and worldwide during the last two centuries. Topics include causes and consequences of business fluctuations, monetary and fiscal policy, models of fluctuations, and empirical macroeconomics.
Prerequisite: ECON 210A and ECON 210B and ECON 210C and ECON 210D and ECON 210E and ECON 210F.

ECON 233. European Economic History. 4 Units.
Prerequisite: ECON 210A and ECON 210B and ECON 210C and ECON 210D and ECON 210E and ECON 210F.

ECON 234. American Economic History. 4 Units.
Focuses on American economic history from colonization onwards. Topics include the development of legal systems, transport systems, financial markets, industrialization, migration, immigration, technological change, and the consequences of slavery.
Prerequisite: ECON 210A and ECON 210B and ECON 210C and ECON 210D and ECON 210E and ECON 210F.
ECON 239. Special Topics in Financial Economics. 2-4 Units.
Studies in selected areas of Financial Economics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.

ECON 241A. Industrial Organization I. 4 Units.
Prerequisite: ECON 100B and ECON 203A.
Restriction: Graduate students only.

ECON 241B. Industrial Organization II. 4 Units.
Prerequisite: ECON 241A and ECON 100B and ECON 203A.
Restriction: Graduate students only.

ECON 241C. Industrial Organization III. 4 Units.
Continuation of the graduate Industrial Organization (IO) sequence. Students are expected to have started a field paper in IO during the earlier quarters, and will finish a completed draft of it during this quarter.
Prerequisite: ECON 241B and ECON 100B and ECON 203A.
Restriction: Graduate students only.

ECON 243A. Game Theory. 4 Units.
A formal introduction to non-cooperative game theory. Topics include properties of Nash Equilibrium and equilibrium refinements, games with imperfect information, and games with incomplete information.
Prerequisite: ECON 201A and ECON 201B and ECON 201C.
Restriction: Graduate students only.

ECON 243B. Advanced Game Theory. 4 Units.
Provides advanced instruction in game theory. The topics covered will be (i) the theory of repeated games and (ii) evolutionary game theory. Applications include bargaining, collusion, reputation, social norms, and the evolution of preferences via natural selection and cultural transmission.
Prerequisite: ECON 243A.
Restriction: Graduate students only.

ECON 245. Empirical Methods in Applied Microeconomics. 4 Units.
Focuses on the empirical methods used in modern applied microeconomics. Teaches methods that can be applied to produce original research in applied fields using cross-sectional and panel data. Applications will be drawn heavily from labor, public, health and development economics.

ECON 249. Special Topics in Microeconomics. 2-4 Units.
Studies in selected areas of Microeconomics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: May be repeated for credit unlimited times.

ECON 251A. Labor Economics I. 4 Units.
Analytic and empirical study of labor markets. Topics may include labor supply and demand, human capital, educational sorting, life-time earnings profiles, discrimination, unemployment, and unions; several econometric techniques are taught as needed.
Prerequisite: ECON 203A.
Restriction: Graduate students only.

ECON 251B. Labor Economics II. 4 Units.
Analytic and empirical study of labor markets. Topics may include labor supply and demand, human capital, educational sorting, life-time earnings profiles, discrimination, unemployment, and unions; several econometric techniques are taught as needed.
Prerequisite: ECON 203A.
Restriction: Graduate students only.

ECON 255. Microeconomics and Public Policy. 4 Units.
Introduces the fundamental principles of microeconomics that are required for applied policy analysis. Provides students with an intuitive understanding of the microeconomic approach, and familiarizes them with concepts used in applied public policy analysis.
Repeatability: May be taken for credit 2 times.
Same as PUB POL 240.
Restriction: Graduate students only.

ECON 259. Special Topics in Labor Economics. 2-4 Units.
Studies in selected areas of Labor Economics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.

ECON 260A. Monetary Economics I. 4 Units.
Focuses on the derivation and estimation of state-of-the-art Dynamic Stochastic General Equilibrium (DSGE) models, with particular emphasis on models useful for monetary policy.

ECON 260B. Monetary Economics II. 4 Units.
Surveys recent issues on monetary policy in uncertain environments. Examines settings where both the policy makers and the private sector are uncertain of future outcomes or the underlying economic structure.

ECON 261A. International Trade I. 4 Units.
Covers theoretical models, empirical methods, and policy issues in international trade. Following the conventional treatment of the Ricardian model, the Heckscher-Ohlin model and the specific factors model, new trade models which incorporate scale economics and imperfect competition will be discussed.
Prerequisite: ECON 210A and ECON 210B.
ECON 261B. International Trade II. 4 Units.
Covers theoretical models, empirical methods, and policy issues in international trade. Following the conventional treatment of the Richardian model, the Heckscher-Ohlin model and the specific factors model, new trade models which incorporate scale economics and imperfect competition will be discussed.
Prerequisite: ECON 261A and ECON 210A and ECON 210B.

ECON 263A. Advanced Macroeconomics I. 4 Units.
Students build Dynamic Stochastic General Equilibrium (DSGE) macroeconomic models from microeconomic foundations. This approach emphasizes intertemporal optimization by firms and households and typically incorporates nominal rigidities such as sluggish price and/or wage adjustment.

ECON 263B. Advanced Macroeconomics II. 4 Units.
Extensively studies policy in dynamic models. Topics: rule versus discretionary-based policy and its implications for macroeconomic stability and multiple equilibria; the design of optimal monetary policy; economic policy with model uncertainty and when the economic model is unknown.
Prerequisite: ECON 263A.

ECON 269. Special Topics in Macroeconomics. 2-4 Units.
Studies in selected areas of Macroeconomics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.

ECON 270A. Seminar in Public Choice I. 4 Units.
Public Choice lies at the intersection of economics and political science. This course involves the use of tools derived from economics to understand the behavior of governments and of citizens when they deal with politics.
Prerequisite: SOC SCI 111H.
Same as POL SCI 270A.
Restriction: Graduate students only.

ECON 270B. Seminar in Public Choice II. 4 Units.
Public Choice lies at the intersection of economics and political science. This course involves the use of tools derived from economics to understand the behavior of governments and of citizens when they deal with politics.
Prerequisite: POL SCI 270A.
Same as POL SCI 270B.
Restriction: Graduate students only.

ECON 270C. Seminar in Public Choice III. 4 Units.
Public Choice lies at the intersection of economics and political science. This course involves the use of tools derived from economics to understand the behavior of governments and of citizens when they deal with politics.
Prerequisite: POL SCI 270B.
Same as POL SCI 270C.
Restriction: Graduate students only.

ECON 272A. Public Economics I. 4 Units.
Covers welfare economics and the theory of optimal taxation. Also presents applications of the theory, including measurement of the distortionary cost of taxation and principles of environmental policy (instrument choice and the debate on the double dividend of environmental taxation).
Prerequisite: ECON 210A and ECON 210B and ECON 210C.

ECON 272B. Public Economics II. 4 Units.
Covers the theory of public goods and models of decentralized provision of such goods, including voluntary provision, voting, bureaucratic provision, and preference revelation mechanisms.
Prerequisite: ECON 210A and ECON 210B and ECON 210C.

ECON 272C. Public Economics III. 4 Units.
Covers two broad categories of government expenditure policies, redistribution programs and social insurance, from a theoretical and empirical perspective as well as the effects on individuals of the income tax system.
Prerequisite: ECON 210A and ECON 210B and ECON 210C.

ECON 279. Special Topics in Public Choice. 2-4 Units.
Studies in selected areas of Public Choice. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.

ECON 281A. Urban Economics I. 4 Units.
Economic reasons for the existence of cities, analysis of urban spatial structure, urban sprawl, Third World urbanization, hedonic price analysis, housing tenure choice.
Prerequisite: ECON 210A.

ECON 281B. Urban Economics II. 4 Units.
Housing in the portfolio, land-use controls, rent control, homelessness, neighborhood effects, urban quality-of-life measurement, and subcenters.
Prerequisite: ECON 210A.

ECON 282A. Transportation Economics I. 4 Units.
Applies microeconomic concepts of demand, costs, pricing, investment, and project evaluation to analyze transportation activities. Empirical studies include travel demand using discrete models, and cost functions.
Restriction: Graduate students only.
ECON 282B. Transportation Economics II. 4 Units.
Policy analysis in presence of road transport externalities (such as environmental spill-overs), imperfect instruments, and other economic distortions such as imperfectly priced networks and imperfect competition. Connections of transportation economics with environmental economics, public finance, spatial economics and industrial organization.

Prerequisite: ECON 282A.
Restriction: Graduate students only.

ECON 285A. Colloquium for Transportation Science I. 2 Units.
Selected perspectives on transportation based on the study of human behavior. Organized by Interdisciplinary Program in Transportation Science. Research presentations by faculty, students, and visitors supplemented by class discussion.
Grading Option: Satisfactory/unsatisfactory only.
Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.

ECON 285B. Colloquium for Transportation Science II. 2 Units.
Selected perspectives on transportation based on the study of human behavior. Organized by Interdisciplinary Program in Transportation Science. Research presentations by faculty, students, and visitors supplemented by class discussion.
Grading Option: Satisfactory/unsatisfactory only.
Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.

ECON 285C. Colloquium for Transportation Science III. 2 Units.
Selected perspectives on transportation based on the study of human behavior. Organized by Interdisciplinary Program in Transportation Science. Research presentations by faculty, students, and visitors supplemented by class discussion.
Grading Option: Satisfactory/unsatisfactory only.
Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.

ECON 289. Special Topics in Urban and Transportation Economics. 2-4 Units.
Studies in selected areas of Urban and Transportation Economics. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: May be repeated for credit unlimited times.

ECON 290. Dissertation Research. 2-12 Units.
Dissertation research with Economics faculty.
Repeatability: May be repeated for credit unlimited times.

ECON 299. Independent Study. 2-4 Units.
Independent research with Economics faculty.
Repeatability: May be repeated for credit unlimited times.