

Department of Economics

William Branch, Department Chair

3279 Social Science Plaza B

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<http://www.economics.uci.edu/>

Overview

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. Economics 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 Economic Self-Sufficiency Policy Research Institute, 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 (p.), Business Economics (p. 3), and Quantitative Economics (p. 2). An optional specialization in International Issues and Economics (p. 5) is available to students in all three majors. In addition, the Honors Program (p.) 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. Applicants interested in the major of Quantitative Economics must also complete one quarter/one semester of approved linear algebra.

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 the UCI Change of Major Criteria website (<http://www.changeofmajor.uci.edu>).

B.A. in Economics

Requirements for the B.A. in Economics

All students must meet the University Requirements (<http://catalogue.uci.edu/informationforadmittedstudents/requirementsforabachelorsdegree>).

All students must meet the School Requirements (<http://catalogue.uci.edu/schoolofsocialsciences/#schoolrequirementstext>).

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. University and 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

ECON 15A- 15B

Probability and Statistics in Economics I
and Probability and Statistics in 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.

Economics Sample Program**Freshman**

Fall	Winter	Spring
ECON 20A	ECON 20B	Intro. Soc. Sci. course
MATH 2A	MATH 2B	MATH 4
Lower-Division Writing	Lower-Division Writing	General Education
	General Education	General Education

Sophomore

Fall	Winter	Spring
ECON 15A	ECON 15B	ECON 100C
ECON 100A	ECON 100B	ECON 122A
SOC SCI 3A	Intro. Soc. Sci. course	General Education
General Education	General Education	General Education

Junior

Fall	Winter	Spring
U-D Econ. course	U-D Econ. course	U-D Econ. course
U-D Econ. course	General Education	U-D Econ. course
General Education	Electives	Electives
Electives	Electives	Electives

Senior

Fall	Winter	Spring
U-D Econ. course	U-D Econ. course	U-D Econ. course
Electives	Electives	Electives
Electives	Electives	Electives
Electives	Electives	Electives

B.A. in Quantitative Economics**Requirements for the B.A. in Quantitative Economics****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. University and School requirements must be met and must include 19 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 3A

Introduction to Linear Algebra

MATH 4

Mathematics for Economists

B. Upper-division:

ECON 105A- 105B- 105C

Intermediate Quantitative Economics I
and Intermediate Quantitative Economics II
and Intermediate Quantitative Economics III

ECON 123A- 123B

Econometrics I
and Econometrics II

STATS 120A- 120B- 120C

Introduction to Probability and Statistics I
and Introduction to Probability and Statistics II
and Introduction to Probability and Statistics III

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:¹

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 the Department of Economics website (<http://www.economics.uci.edu>).

NOTE: Students who are double majoring in Quantitative Economics and Mathematics may (1) substitute MATH 2D-MATH 2E and MATH 3A for MATH 4.

Quantitative Economics Sample Program

Freshman		
Fall	Winter	Spring
ECON 20A	ECON 20B	Intro. Soc. Sci. course
MATH 2A	MATH 2B	MATH 4
Lower-Division Writing	Lower-Division Writing	General Education
	General Education	MATH 3A
Sophomore		
Fall	Winter	Spring
ECON 105A	ECON 105B	ECON 105C
STATS 120A	STATS 120B	STATS 120C
SOC SCI 3A	Intro. Soc. Sci. course	General Education
General Education	General Education	General Education
Junior		
Fall	Winter	Spring
ECON 123A	ECON 123B	U-D Econ. course
U-D Econ. course	General Education	U-D Econ. course
U-D Econ. course	U-D Econ. course	Electives
General Education	Electives	Electives
Senior		
Fall	Winter	Spring
U-D Econ. course	U-D Econ. course	U-D Econ. course
Electives	Electives	Electives
Electives	Electives	Electives
Electives	Electives	Electives

B.A. in Business Economics

Requirements for the B.A. in Business Economics

Departmental Requirements for the Major in Business Economics

The Business Economics major is for students seeking a business orientation in their study of economics. It does not replicate the traditional undergraduate business school curriculum. Instead, it offers a more tightly focused curriculum that is guided by the rigorous logic and integrative perspective of economics. University and School requirements must be met and must include 20 courses as specified below.

A. Lower-division:

ECON 20A- 20B	Basic Economics I and Basic Economics II
ECON 15A- 15B	Probability and Statistics in Economics I and Probability and Statistics in Economics II
ECON 25	The Economics of Accounting Decisions
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- 122B	Applied Econometrics I and Applied Econometrics II
C. Seven additional Economics courses, including at least four four-unit upper-division courses. ¹	
Two of the electives must be selected from following business electives list:	
ECON 125	Business Forecasting
ECON 131A	The Economics of Risk and Uncertainty
ECON 132A	Introduction to Financial Investments
ECON 134A	Corporate Finance
ECON 135	Mathematics of Finance
ECON 142A	Industrial Organization I
ECON 143	Energy Economics
ECON 161A	Money and Banking
ECON 161B	International Money
ECON 167	International Trade and Commercial Policy
And two of the electives must be selected from the following management electives list:	
ECON 140	Managerial Economics
ECON 147A	Corporate Governance
ECON 147B	Economics of Strategy
ECON 148	Business Decisions
ECON 115	Behaviorial Economics
ECON 151A	Labor Economics and Human Resources I
ECON 165	Economics of International Business
D. A maximum of three four-unit courses selected from ECON 190–199 may be counted toward the major.	

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

Business Economics Sample Program

Freshman		
Fall	Winter	Spring
ECON 20A	ECON 20B	Intro. Soc. Sci. course
MATH 2A	MATH 2B	MATH 4
Lower-Division Writing	Lower-Division Writing	ECON 25
	General Education	General Education
Sophomore		
Fall	Winter	Spring
ECON 15A	ECON 15B	ECON 122A
ECON 100A	ECON 100B	ECON 100C
SOC SCI 3A	Intro. Soc. Sci. course	General Education
General Education	General Education	General Education
Junior		
Fall	Winter	Spring
ECON 122B	U-D Econ. course	U-D Econ. course
U-D Econ. course	General Education	General Education
U-D Econ. course	Electives	Electives
General Education	Electives	Electives
Senior		
Fall	Winter	Spring
U-D Econ. course	U-D Econ. course	U-D Econ. course
Electives	Electives	Electives
Electives	Electives	Electives
Electives	Electives	Electives

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.

Specialization Requirements

A. Lower-division:

INTL ST 11	Global Cultures and Society
INTL ST 13	Global Economy (or ECON 13)
INTL ST 14	Introduction to International Relations

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

ECON 157	Economic Development
ECON 161B	International Money
ECON 162	Poverty, Growth, and Development
ECON 164A	The Industrial Revolution in Western Europe
ECON 165	Economics of International Business
ECON 167	International Trade and Commercial Policy

C. Three additional international general education elective courses selected from the following:¹

HISTORY 21A	World: Innovations
HISTORY 21B	World: Empires and Revolutions
HISTORY 21C	World: Nation, War, and Rights
INTL ST 112A	International Business
INTL ST 122	Nuclear Environments
INTL ST 179	Regional Topics in International Studies (if focus is on international economy)
POL SCI 141B	International Political Economy
POL SCI 141C	International Political Economy of East Asia

¹ At most, only one lower-division elective may be taken.

Additional Information

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 190BW; satisfies the upper-division writing requirement).

Minor in Economics

Economics Minor Requirements

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

A. Complete the following core courses (28 units):

ECON 15A- 15B	Probability and Statistics in Economics I and Probability and Statistics in Economics II ¹
ECON 20A- 20B	Basic Economics I and Basic Economics II ²

and select one of the following sequences:

ECON 100A- 100B- 100C	Intermediate Economics I and Intermediate Economic II and Intermediate Economic III
or	
ECON 105A- 105B- 105C	Intermediate Quantitative Economics I and Intermediate Quantitative Economics II and Intermediate Quantitative Economics III

B. Electives (eight units): two upper-division ECON electives (excluding ECON 199).³

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

Ph.D. in Economics

The Department of Economics offers a Ph.D. program in Economics. Drawing upon the School's strong quantitative tradition, it specializes in public choice (p.), transportation economics (p.), urban economics, econometrics, macroeconomics, 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 December 1 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).

Master's Degrees

NOTE: Although the Department does not have a terminal master's program, students may earn an optional master's degree as part of the Ph.D. program.

Requirements for the M.A. in Economics

The Master's degree is awarded only to students admitted to the Ph.D. program who have completed the following requirements: The nine core courses in microeconomics (ECON 210A-ECON 210B-ECON 210C), macroeconomics (ECON 210D-ECON 210E-ECON 210F), and econometrics (ECON 220A-ECON 220B-ECON 220C), with no grade lower than a B and with a grade point average across all graduate courses of at least 3.1. Pass the written preliminary exam following the first-year courses at least at the Master's-pass level.

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 student making satisfactory progress in the program will have advanced to Ph.D. candidacy before the beginning of their third 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.

Ph.D. in Economics with a Concentration in Transportation

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

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 (MGMTMBA 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.

Ph.D. in Economics with a Concentration in Public Choice

Students can also pursue a Ph.D. 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.

Requirements

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.

Ph.D. in Economics with a Concentration in Monetary Policy and Central Banking

Students can also pursue a Ph.D. in Economics with a concentration in Monetary Policy and Central Banking. The concentration draws on faculty's expertise in Monetary Policy and Central Banking - a number of UCI faculty members across the social sciences have experience working in and with central banks. This concentration provides students with the tools necessary for careers in monetary policy research or central banking.

Requirements

Students who elect to earn a Ph.D. in Economics with a concentration in Monetary Policy and Central Banking are admitted under the normal procedures for the program in Economics, and must fulfill all the requirements for the Economics degree. In addition, a candidate for the concentration in Monetary Policy and Central Banking must:

1. Fulfill the requirements for the macroeconomics subfield as one of the two fields of specialization required of all Economics Ph.D. candidates.
2. Fulfill the requirements for either the international economics subfield or the econometrics subfield as the second of the two fields of specialization required of all Economics Ph.D. candidates.
3. Students must take ECON 224A.
4. Students' dissertations must be aligned with the research initiatives undertaken by central banks, as determined by the program director.

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 email to plgs@law.uci.edu. A full description of the program, with links to all relevant application information, can be found at the School of Law Concurrent Degree Programs website (<http://www.law.uci.edu/academics/interdisciplinary-studies/concurrent-degrees.html>).

4+1 M.A. Degree in Philosophy, Political Science and Economics (PPE)

The goal of this program is to train students in three critically important and related approaches to understanding the social world around us. Philosophy develops analytic rigor and trains students to reason logically. Political Science provides an understanding of how institutions impact modern societies and helps students evaluate the choices that such institutions regularly make. And economics is the study of how individuals, firms, and governments make decisions which together determine how resources are allocated. An appreciation of economics has increasingly become crucial for an

understanding of institutional policy making. The objective of the M.A. in PPE is to prepare students for careers in government, law, private or public corporations, and non-profit organizations.

In order to be admitted to the program, undergraduate students must submit an application in the winter quarter of their third year. More information can be found in the School of Social Sciences' Department of Logic and Philosophy of Science (<http://catalogue.uci.edu/schoolofsocialsciences/departamentoflogicandphilosophyofscience/#graduatestext>).

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.

Faculty

Neerja Aggarwal, Ph.D. University of California, Irvine, *Lecturer of Economics*

D. Bell, Ph.D. University of California, Berkeley, *Professor Emeritus of Economics*

Daniel E. Bogart, Ph.D. University of California, Los Angeles, *Associate Professor of Economics*

William A. Branch, Ph.D. University of Oregon, *Department Chair and UCI Chancellor's Fellow and Professor of Economics*

David Brownstone, Ph.D. University of California, Berkeley, *Professor Emeritus of Economics*

Jan K. Brueckner, Ph.D. Stanford University, *UCI Chancellor's Professor of Economics; Urban Planning and Public Policy*

Jean-Paul Carvalho, Ph.D. Oxford University, *Associate Professor of Economics; Logic and Philosophy of Science*

Debapriya Chakraborty, Ph.D. University of California, Irvine, *Lecturer of Economics*

Jiawei Chen, Ph.D. Johns Hopkins University, *Associate Professor of Economics*

Natalia Chernyshoff, Ph.D. University of California, Davis, *Lecturer of Economics*

Damon Clark, Ph.D. Oxford University, *Associate Professor of Economics; Urban Planning and Public Policy*

Arthur S. De Vany, Ph.D. University of California, Los Angeles, *Professor Emeritus of Economics*

Yingying Dong, Ph.D. Boston College, *Associate Professor of Economics*

John Duffy, Ph.D. University of California, Los Angeles, *Professor of Economics*

Gordon J. Fielding, Ph.D. University of California, Los Angeles, *Professor Emeritus of Economics*

Matthew Freedman, Ph.D. University of Maryland-College Park, *Associate Professor of Economics*

Michelle Garfinkel, Ph.D. Brown University, *Professor of Economics*

Amihai Glazer, Ph.D. Yale University, *Professor of Economics*

Matthew Harding, Ph.D. Massachusetts Institute of Technology, *Associate Professor of Economics; Statistics*

Ivan G. Jeliakov, Ph.D. Washington University, *Associate Professor of Economics; Statistics*

Brian C. Jenkins, Ph.D. University of North Carolina at Chapel Hill, *Lecturer with Potential Security of Employment of Economics*

Linda Cohen Jennings, Ph.D. California Institute of Technology, *Professor of School of Law; Economics*

Lai Jiang, Ph.D. New York University, *Lecturer of Economics*

Igor Kopylov, Ph.D. University of Rochester, *Associate Professor of Economics*

Ying-Ying Lee, Ph.D. University of Wisconsin-Madison, *Assistant Professor of Economics*

Raffaele Mari, M.A. San Diego State University, *Lecturer of Economics*

Michael T. McBride, Ph.D. Yale University, *Professor of Economics; Logic and Philosophy of Science; Religious Studies*

Martin C. McGuire, Ph.D. Harvard University, *UCI Endowed Chair and Professor Emeritus of Economics*

Fabio Milani, Ph.D. Princeton University, *Professor of Economics*

David Neumark, Ph.D. Harvard University, *UCI Chancellor's Professor of Economics; Paul Merage School of Business*

Dale J. Poirier, Ph.D. University of Wisconsin-Madison, *Professor Emeritus of Economics; Statistics*

Priya Ranjan, Ph.D. Columbia University, *Professor of Economics*

Gary Richardson, Ph.D. University of California, Berkeley, *UCI Chancellor's Fellow and Professor of Economics; European Languages and Studies; Religious Studies*

Guillaume Rocheteau, Ph.D. University of Paris, *UCI Chancellor's Fellow and Professor of Economics*

Jose Antonio Rodriguez Lopez, Ph.D. University of California, Berkeley, *Associate Professor of Economics*

Donald G. Saari, Ph.D. Purdue University, *UCI Distinguished Professor Emeritus of Economics; Logic and Philosophy of Science; Mathematics*

George Sarraf, Ph.D. Claremont Graduate University, *Lecturer of Economics*

Nilopa Shah, Ph.D. University of California, Irvine, *Lecturer of Economics*

Paul R. Shirey, Ph.D. University of California, Irvine, *Lecturer of Social Sciences; Economics*

Stergios Skaperdas, Ph.D. Johns Hopkins University, *Clifford S. Heinz Chair and Professor of Economics; Political Science*

Kenneth A. Small, Ph.D. University of California, Berkeley, *Professor Emeritus of Economics*

Eric Swanson, Ph.D. Stanford University, *Professor of Economics*

Wilima Wadhwa, Ph.D. University of California, Irvine, *Lecturer of Economics*

Affiliate Faculty

Frank D. Bean, Ph.D. Duke University, *UCI Distinguished Professor of Sociology; Economics; Education* (international migration, demography, Mexican immigration, racial and ethnic relations, economic sociology, family)

N. Edward Coulson, Ph.D. University of California, San Diego, *Professor of Paul Merage School of Business; Economics*

Greg Duncan, Ph.D. University of Michigan, *UCI Distinguished Professor of Education; Economics; Psychology and Social Behavior* (economics of education, program evaluation, child development)

Bernard N. Grofman, Ph.D. University of Chicago, *Professor of Political Science; Economics*

David Hirshleifer, Ph.D. University of Chicago, *Paul Merage Chair in Business Growth and Professor of Paul Merage School of Business; Economics*

Mireille Jacobson, Ph.D. Harvard University, *Associate Professor of Paul Merage School of Business; Economics*

Philippe Jorion, Ph.D. University of Chicago, *Professor of Paul Merage School of Business; Economics*

Marek Kaminski, Ph.D. University of Maryland, College Park, *Associate Professor of Political Science; Economics*

Radhika Lunawat, Ph.D. University of Minnesota, *Assistant Professor of Paul Merage School of Business; Economics*

Emily Owens, Ph.D. University of Maryland at College Park, *Associate Professor of Criminology, Law and Society; Economics* (how government policies affect the prevalence of criminal activity as well as how agents within the criminal justice system, particularly police, prosecutors, and judges, respond to policy changes)

Andrew Policano, Ph.D. Brown University, *Professor Emeritus of Paul Merage School of Business; Economics*

Maria F. Rosales Rueda, Ph.D. University of Chicago, *Assistant Professor of Education; Economics*

Jean-Daniel M. Saphores, Ph.D. Cornell University, *Professor of Civil and Environmental Engineering; Economics; Urban Planning and Public Policy* (transportation economics, planning and policy, environmental and natural resource economics and policy, quantitative methods)

Brian Skyrms, Ph.D. University of Pittsburgh, *UCI Distinguished Professor of Logic and Philosophy of Science; Economics; Philosophy*

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: No Economics Majors. ECON 1 may not be taken for credit if taken concurrently or after ECON 20A or ECON 20B.

(III)

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.

(II or III).

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 Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

(III, VIII)

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.

Prerequisite or corequisite: MATH 2A and MATH 2B and MATH 4

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

(Va)

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.

Prerequisite: ECON 15A and MATH 4

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

(Va)

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.

(III)

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.

Overlaps with MGMT 4A, ECON 23.

Restriction: Economics, Quantitative Economics, Business Economics, and Business Info Management majors have first consideration for enrollment. For School of Social Sciences majors, MGMT 4A may not be used as a substitute for ECON 20A.

(III)

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.

Prerequisite: ECON 20A or ECON 13 or ECON 23

Overlaps with MGMT 4B.

Restriction: Business Information Mgmt Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Mechanical Engineering Majors have first consideration for enrollment. Aerospace Engineering Majors have first consideration for enrollment. Civil Engineering Majors have first consideration for enrollment. Environmental Engineering Majors have first consideration for enrollment. International Studies Majors have first consideration for enrollment. For School of Social Sciences majors, MGMT 4B may not be used as a substitute for ECON 20B.

(III)

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.

Restriction: Engineering Majors only. Mechanical Engineering Majors only. Aerospace Engineering Majors only. Civil Engineering Majors only. Environmental Engineering Majors only.

(III)

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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 100B. Intermediate Economic 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 100C. Intermediate Economic 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 105A. Intermediate Quantitative Economics I . 4 Units.

An advanced and mathematical version of ECON 100A 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 105B. Intermediate Quantitative Economics II . 4 Units.

An advanced and mathematical version of ECON 100B for students in the Quantitative Economics major.

Prerequisite: ECON 105A

Overlaps with ECON 100B.

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 105C. Intermediate Quantitative Economics III . 4 Units.

An advanced and mathematical version of ECON 100C for students in the Quantitative Economics major.

Prerequisite: ECON 105B

Overlaps with ECON 100C.

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 15B or STATS 120B) and (ECON 100A or ECON 105A)

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 122A. Applied Econometrics I. 4 Units.

Introduction to econometrics emphasizing practical applications in microeconomics and macroeconomics.

Prerequisite or corequisite: ECON 100A or ECON 105A and (ECON 15B or MATH 130B or MATH 133A or STATS 120C)

Overlaps with ECON 123A, ECON 123B.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

(Ib)

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) and 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: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

(Ib)**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 122A

Overlaps with MGMT 180.

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 127A. 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. Formerly ECON 117.

Prerequisite: ECON 15B and ECON 100B

ECON 129. Special Topics in Quantitative Methods. 4 Units.

Studies in selected areas of Quantitative Methods. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 or corequisite: (ECON 15B or ECON 105A or MATH 130B) and (ECON 100B or ECON 105B or STATS 120B or MATH 133A) and (ECON 100C or STATS 120C)

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 or corequisite: (ECON 15A and ECON 15B and ECON 122A and ECON 100A and ECON 100B and ECON 100C) or (ECON 105A and ECON 105B and ECON 105C) or (MATH 130A and STATS 120A and STATS 120B and STATS 120C) or MATH 130B or MATH 133A

Overlaps with MGMT 141.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 (ECON 15A or MATH 130A or STATS 120A) and (ECON 15B or STATS 120B)

Overlaps with MGMT 109.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 Blac-Scholes, and other equations are discussed.

Prerequisite: MATH 3A or MATH H3A

Same as MATH 176.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Mathematics Majors have first consideration for enrollment.

ECON 137W. Financial Markets and the Macroeconomy. 4 Units.

Students are required to write a paper on a research question related to.

Prerequisite: ECON 122A. Satisfactory completion of the Lower-Division Writing requirement.

(Ib)

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: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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) or (ECON 105A and ECON 105B)

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 141A. Public Economics I. 4 Units.

Examines the role of the government in the economy and its impact on individuals and firms.

Prerequisite: (ECON 100A and ECON 100B) or (ECON 105A and ECON 105B)

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 and ECON 105B)

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 142CW. Industrial Organization III. 4 Units.

Research in industrial organization. Satisfies the honors research requirement.

Prerequisite: (ECON 100A and ECON 100B) or (ECON 105A and ECON 105B). Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

(Ib)

ECON 143. Energy Economics. 4 Units.

The economics of markets for oil, natural gas, electricity, and 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 15A and (ECON 100A or ECON 105A)

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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, traffic congestion.

Prerequisite or corequisite: ECON 20A and ECON 20B. Recommended: ECON 100A.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

ECON 144B. Urban Economics II. 4 Units.

Housing policy analysis, urban public goods and services, crime, pollution, urban amenities.

Prerequisite: ECON 20A and ECON 20B. Recommended: ECON 100A.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

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 100A or ECON 105A

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 145FW. Economics of the Environment II. 4 Units.

Applications of the tools covered in ECON 145E to topics such 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. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

(Ib)**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 or corequisite: (ECON 100A and ECON 100B) or (ECON 105A and ECON 105B)

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 and ECON 105B and ECON 105C)

Overlaps with MGMT 110, MGMT 168.

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 (SOCIO 10A and SOCIO 10B and SOCIO 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 SOCIO 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON 149W. 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.

Prerequisite: Satisfactory completion of the Lower-Division Writing requirement.

Repeatability: Unlimited as topics vary.

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

(Ib)**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) or (ECON 105A and ECON 105B)

Restriction: Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment. Anthropology Majors have first consideration for enrollment.

ECON 154. Voting and Political Manipulation. 4 Units.

Introduction to social choice and cooperative games. Topics include majority rule, types of voting methods, apportionment and proportional representation, agenda manipulation, coalition formation, voting power, political consequences of electoral laws.

Same as INTL ST 156A, SOC SCI 121T, POL SCI 151H.

Restriction: International Studies Majors have first consideration for enrollment. Political Science Majors have first consideration for enrollment. Social Science Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

ECON H155. Current Issues in Political Economy. 4 Units.

Political economy seeks explanations that combine insights from both economics and politics. Topics include the interaction of government and markets, the causes of the Great Recession, and the sources of income and wealth inequality.

Prerequisite: ECON 20A or ECON 20B or ECON 13 or INTL ST 13

Restriction: Economics Honors students only.

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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 or corequisite: (ECON 100A and ECON 100B) or (ECON 105A and ECON 105B) and (ECON 100C or ECON 105C)

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 or corequisite: (ECON 100A and ECON 100B) or (ECON 105A and ECON 105B) and ECON 100C

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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 161A and (ECON 100C or ECON 105C)

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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, aspects of poverty, and the policies that have been undertaken to tackle poverty.

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

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: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative 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? Has the process of industrialization affected living standards? Focusing on these questions, students learn how to apply economic theory and quantitative methods.

Prerequisite or corequisite: ECON 100C or ECON 105C. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Business Economics Majors have first consideration for enrollment. Economics Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment.

(Ib)

ECON 164C. American Economic History from Colonization to the Present. 4 Units.

Examines how the American economy evolved from colonization to the post-war era. Topics include relations with foreign countries, the emergence of manufacturing and big business, railroads, slavery, war, the Great Depression, the rise of fiscal and monetary policies.

Prerequisite: ECON 20A and ECON 20B

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 or corequisite: ECON 100C or ECON 105C

ECON 167. 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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. Business Economics Majors have first consideration for enrollment.

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 Majors have first consideration for enrollment. Quantitative Economics Majors have first consideration for enrollment. 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 and helps students plan a research program. Students complete their thesis.

Prerequisite: ECON H190A. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Economics Honors students only.

(Ib)**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.

Restriction: Economics Honors students only.

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: Graduate students only. Economics Majors 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: Graduate students only. Economics Majors 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: Graduate students only. Economics Majors 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 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 and Econometrics I. 4 Units.

Takes up where ECON 202 leaves off. Continuing in the likelihood perspective, begins with Bayesian point estimation and then covers interval estimation and hypothesis testing from both frequentist and Bayesian perspectives.

Corequisite: ECON 221A

Restriction: Graduate students only.

ECON 220B. Statistics and Econometrics II. 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, and the bootstrap.

Corequisite: ECON 221B

Prerequisite: ECON 220A

Restriction: Graduate students only.

ECON 220C. Statistics and Econometrics III. 4 Units.

Covers econometric time series, discrete choice and count models, sample selection, and duration models along with Bayesian and classical asymptotic methods.

Corequisite: ECON 221C

Prerequisite: ECON 220B

Restriction: Graduate 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

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

ECON 227A. Experimental Econ I. 4 Units.

An introduction to experimental social science. Students learn experimental methodology, design, and analysis, and be exposed to active research areas. Each student writes a proposal for their own experiment and presents the design in class.

Restriction: Graduate students only.

ECON 227B. Experimental Econ II. 4 Units.

Focuses on implementing experimental projects in a laboratory environment. Subjects learn about human subjects protection, program experimental software for their own projects, and conduct live experiment sessions.

Restriction: Graduate students only.

ECON 229. Special Topics in Econometrics. 2-4 Units.

Studies in selected areas of Econometrics. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.

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 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.

Analysis of the structure and economic performance of markets, and the impact of public policy and their efficiency and equity. Effects of information structure. Oligopoly, cartels, mergers, vertical integration, patents, innovation, antitrust, and regulation.

Prerequisite: ECON 100B and ECON 203A

Restriction: Graduate students only.

ECON 241B. Industrial Organization II. 4 Units.

Analysis of the structure and economic performance of markets, and the impact of public policy and their efficiency and equity. Effects of information structure. Price flexibility and dispersion, auctions, search and industrial structure, intrafirm organization.

Prerequisite: ECON 241A 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 210A and ECON 210B and ECON 210C

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.

Analysis of the relationships between education and the labor market (human capital theory), between resources devoted to education and the return to education (the education production function) and between education and labor market inequality (the theory of skill-biased technical change).

Prerequisite: ECON 203A

Restriction: Graduate students only.

ECON 251B. Labor Economics II. 4 Units.

Analysis of core topics in labor economics, with an emphasis on empirical methods. Topics may include minimum wages, discrimination, gender, aging and retirement, labor market networks, personnel economics, and employment policy.

Prerequisite: ECON 203A

Restriction: Graduate students only.

ECON 251C. Labor Economics III . 4 Units.

Discussion of treatment effect/program evaluation in labor economics, emphasizing identification. Classical labor topics, including human capital, technology, wages, labor supply, and migration are discussed in the context of causal inference. A unified framework is used in analyzing identification strategies.

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 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 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 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 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. Political Economy I. 4 Units.

Political Economy lies at the intersection of economics and political science. Course studies effects of politics on the economy and uses tools derived from economics to understand the behavior of governments and of citizens when they deal with politics.

Same as POL SCI 270A.

Restriction: Graduate students only.

ECON 270B. Political Economy II. 4 Units.

Political Economy lies at the intersection of economics and political science. Course studies effects of politics on the economy and uses 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. Political Economy III. 4 Units.

Political Economy lies at the intersection of economics and political science. Course studies effects of politics on the economy and uses 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 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 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 275. Economics of Government. 4 Units.

Prepares students to analyze public policy questions with tools from economics. By the end, students should be able to identify important economic issues in public policy debates and consume and critique economic research on these topics.

Same as PUB POL 227.

ECON 279. Special Topics in Political Economy. 2-4 Units.

Studies in selected areas of Political Economy. 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.

Economics of the airline industry. Hub-and-spoke networks, the effects of competition on airfares, price dispersion, airline alliances, airport congestion, product unbundling.

Prerequisite: ECON 282A

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.