

# ECONOMICS

The Department of Economics at CU Boulder is recognized for the high quality of its teaching and research.

Economics describes the processes by which scarce resources are allocated, how changes in these processes affect this allocation and how these processes can be improved. Economics is a quantitative, policy-oriented social science with a highly-developed body of theory and a vast range of applications. Theoretical and quantitative analyses are informed by and contribute to our understanding of our economic, social and political institutions.

Microeconomics is the study of the daily decisions that consumers, workers, and business people make, and of the interactions between these decisions in markets. Macroeconomics is the study of how the decisions made by all individuals and businesses are together responsible for the size and growth of the economy, for recessions and for unemployment.

Among the major topics within economics are natural resource and environmental economics, international trade and finance, public economics, labor economics, urban and regional economics, development economics, economic history, industrial organization, law and economics, health economics, financial economics and monetary economics. In addition, econometrics is the study of how statistical methods can be best applied to economic problems. Our department offers courses in most of these fields in every semester.

Course code for this program is ECON.

## Economics Honors Program

The honors program in economics provides an opportunity for highly motivated majors to undertake individualized research and to graduate with honors (*cum laude*, *magna cum laude*, *summa cum laude*) in economics. Economics majors with senior standing and both economics and overall GPAs of 3.40 or better are eligible to participate. Participants enroll in the economics honors seminars, which provide instruction in research methodology essential to the preparation of the honors thesis. Students interested in the economics honors program should contact the departmental honors advisor during their junior year.

## Bachelor's Degree

- Economics - Bachelor of Arts (BA) (<https://catalog.colorado.edu/undergraduate/colleges-schools/arts-sciences/programs-study/economics/economics-bachelor-arts-ba/>)

## Minor

- Economics - Minor (<https://catalog.colorado.edu/undergraduate/colleges-schools/arts-sciences/programs-study/economics/economics-minor/>)

## Faculty

While many faculty teach both undergraduate and graduate students, some instruct students at the undergraduate level only. For more information, contact the faculty member's home department.

Antman, Francisca Marie ([https://experts.colorado.edu/display/fisid\\_144606/](https://experts.colorado.edu/display/fisid_144606/))  
Professor; PhD, Stanford University

Avila, Sara ([https://experts.colorado.edu/display/fisid\\_165935/](https://experts.colorado.edu/display/fisid_165935/))  
Instructor; PhD, National University of Mexico

Barham, Tania C.J. ([https://experts.colorado.edu/display/fisid\\_140077/](https://experts.colorado.edu/display/fisid_140077/))  
Associate Professor; PhD, University of California, Berkeley

Bhatia, Alpna ([https://experts.colorado.edu/display/fisid\\_143993/](https://experts.colorado.edu/display/fisid_143993/))  
Instructor; PhD, University of Colorado Boulder

Boileau, Martin ([https://experts.colorado.edu/display/fisid\\_113872/](https://experts.colorado.edu/display/fisid_113872/))  
Professor, Chair; PhD, Queen's University (Canada)

Bottan, Daria ([https://experts.colorado.edu/display/fisid\\_168423/](https://experts.colorado.edu/display/fisid_168423/))  
Senior Instructor; PhD, LUISS Guido Carli (Italy)

Cadena, Brian C. ([https://experts.colorado.edu/display/fisid\\_145740/](https://experts.colorado.edu/display/fisid_145740/))  
Associate Professor; PhD, University of Michigan Ann Arbor

Carballo, Jeronimo Rafael ([https://experts.colorado.edu/display/fisid\\_155949/](https://experts.colorado.edu/display/fisid_155949/))  
Associate Professor; PhD, University of Maryland, College Park

Carlos, Ann M. ([https://experts.colorado.edu/display/fisid\\_105534/](https://experts.colorado.edu/display/fisid_105534/))  
Professor Emerita

Chen, Yongmin ([https://experts.colorado.edu/display/fisid\\_108989/](https://experts.colorado.edu/display/fisid_108989/))  
Professor, Endowed Chair; PhD, Boston University

De Bartolome, Charles A.M. ([https://experts.colorado.edu/display/fisid\\_101302/](https://experts.colorado.edu/display/fisid_101302/))  
Professor Emeritus; PhD, University of Pennsylvania

Flores, Nicholas E. ([https://experts.colorado.edu/display/fisid\\_107603/](https://experts.colorado.edu/display/fisid_107603/))  
Professor; PhD, University of California, San Diego

Gebhardt, Karen ([https://experts.colorado.edu/display/fisid\\_159742/](https://experts.colorado.edu/display/fisid_159742/))  
Senior Instructor; PhD, Colorado State University

Graves, Philip E. ([https://experts.colorado.edu/display/fisid\\_102050/](https://experts.colorado.edu/display/fisid_102050/))  
Professor Emeritus; PhD, Northwestern University

Greenwood, Michael J. ([https://experts.colorado.edu/display/fisid\\_102361/](https://experts.colorado.edu/display/fisid_102361/))  
Professor Emeritus; Ph.D., Northwestern University

Howe, Charles W.  
Professor Emeritus

Hsiao, Frank S.T.  
Professor Emeritus

Hughes, Jonathan Edward ([https://experts.colorado.edu/display/fisid\\_147335/](https://experts.colorado.edu/display/fisid_147335/))  
Associate Professor, Associate Chair; PhD, University of California, Davis

Iyigun, Fevzi Murat ([https://experts.colorado.edu/display/fisid\\_118373/](https://experts.colorado.edu/display/fisid_118373/))  
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Jaworski, Taylor Allen ([https://experts.colorado.edu/display/fisid\\_159798/](https://experts.colorado.edu/display/fisid_159798/))  
Associate Professor; PhD, University of Arizona

Kaempfer, William H.  
Professor Emeritus

Kaffine, Daniel Thomas ([https://experts.colorado.edu/display/fisid\\_153280/](https://experts.colorado.edu/display/fisid_153280/))  
Professor; PhD, University of California, Santa Barbara

Keller, Wolfgang ([https://experts.colorado.edu/display/fisid\\_141891/](https://experts.colorado.edu/display/fisid_141891/))  
Professor; PhD, Yale University

Kim, Jin-Hyuk ([https://experts.colorado.edu/display/fisid\\_149615/](https://experts.colorado.edu/display/fisid_149615/))  
Associate Professor; PhD, Cornell University

Kimball, Miles ([https://experts.colorado.edu/display/fisid\\_157993/](https://experts.colorado.edu/display/fisid_157993/))  
Endowed Chair, Professor; PhD, Harvard University

Klein, Jennifer Lynn ([https://experts.colorado.edu/display/fisid\\_158332/](https://experts.colorado.edu/display/fisid_158332/))  
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Lillydahl, Jane  
Professor Emerita

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Professor; PhD, The Ohio State University

Mansfield, Richard ([https://experts.colorado.edu/display/fisid\\_157743/](https://experts.colorado.edu/display/fisid_157743/))  
Assistant Professor; PhD, Yale University

Markusen, James R. ([https://experts.colorado.edu/display/fisid\\_103187/](https://experts.colorado.edu/display/fisid_103187/))  
Professor Emeritus, Distinguished Professor; PhD, Boston College

Martins-Filho, Carlos B. ([https://experts.colorado.edu/display/fisid\\_147510/](https://experts.colorado.edu/display/fisid_147510/))  
Professor; PhD, University of Tennessee, Knoxville

Maskus, Keith E. ([https://experts.colorado.edu/display/fisid\\_103414/](https://experts.colorado.edu/display/fisid_103414/))  
Professor Emeritus, Distinguished Professor; PhD, University of Michigan Ann Arbor

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Associate Professor; MA, Boston University

McKinnish-Harlee, Terra ([https://experts.colorado.edu/display/fisid\\_115558/](https://experts.colorado.edu/display/fisid_115558/))  
Professor; PhD, Carnegie Mellon University

McNown, Robert F.  
Professor Emeritus

Mertens, William G. ([https://experts.colorado.edu/display/fisid\\_105762/](https://experts.colorado.edu/display/fisid_105762/))  
Senior Instructor; PhD, University of Colorado Boulder

Morey, Edward R.  
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Nigai, Sergey K. ([https://experts.colorado.edu/display/fisid\\_159293/](https://experts.colorado.edu/display/fisid_159293/))  
Assistant Professor; PhD, ETH Zurich

Peri, Alessandro ([https://experts.colorado.edu/display/fisid\\_157820/](https://experts.colorado.edu/display/fisid_157820/))  
Assistant Professor; PhD, Universidad Carlos III de Madrid

Poulson, Barry  
Professor Emeritus

Savage, Scott James ([https://experts.colorado.edu/display/fisid\\_121239/](https://experts.colorado.edu/display/fisid_121239/))  
Professor; PhD, Curtin University of Technology (Western Australia)

Shiue, Carol Hua ([https://experts.colorado.edu/display/fisid\\_141892/](https://experts.colorado.edu/display/fisid_141892/))  
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Song, Yangwei ([https://experts.colorado.edu/display/fisid\\_167159/](https://experts.colorado.edu/display/fisid_167159/))  
Assistant Professor; PhD, University of Rochester

Swanson, Shawn ([https://experts.colorado.edu/display/fisid\\_168257/](https://experts.colorado.edu/display/fisid_168257/))  
Instructor; PhD, University of Colorado Boulder

Valkovci, Mark  
Lecturer; PhD, University of Colorado Boulder

Waldman, Donald M.  
Professor Emeritus

Weber, Stephanie  
Assistant Professor; PhD, Yale University

Zax, Jeffrey S. ([https://experts.colorado.edu/display/fisid\\_100898/](https://experts.colorado.edu/display/fisid_100898/))  
Professor, Associate Chair; PhD, Harvard University

## Courses

### ECON 1010 (1-3) Economics in Action

Applies foundational concepts from microeconomics and microeconomics to current events to exemplify economic decision-making. Topics vary each term, and may include trade, environment, discrimination, government policy, technology, money, education, entrepreneurship, health, employment, immigration, inequality, or development. Credit given in this course is not included in the calculation of an economics major GPA.

### ECON 1078 (3) Mathematical Tools for Economists 1

This course is the first of a two-course sequence (ECON 1078 and ECON 1088) designed to introduce a variety of mathematical concepts that will be used extensively in subsequent economics coursework. The fundamental skills covered in this class are essential for economic analysis. Topics include algebra, graphs, functions, and logic.

**Additional Information:** Arts Sci Core Curr: Quant Reasn Mathmat Skills  
Arts Sci Gen Ed: Quantitative Reasoning Math  
Departmental Category: Quantitative Economics

### ECON 1088 (3) Mathematical Tools for Economists 2

Continuation of ECON 1078. Teaches mathematical skills for use in economics. Topics include derivatives, optimization and integration. These skills are used on "real world" problems and illustrated with computer assignments. For more information about the math placement referred to in the "Enrollment Requirements", contact your academic advisor.

**Equivalent - Duplicate Degree Credit Not Granted:** APPM 1345 or APPM 1350 or MATH 1081 or MATH 1300 or MATH 1310 or MATH 1330  
**Requisites:** Requires prerequisite course of ECON 1078 or MATH 1011 or MATH 1071 or MATH 1150 or MATH 1160 (minimum grade C-) or an ALEKS math exam taken in 2016 or earlier, or placement into pre-calculus based on your admission data and/or CU Boulder coursework.

**Additional Information:** Arts Sci Core Curr: Quant Reasn Mathmat Skills  
Arts Sci Gen Ed: Quantitative Reasoning Math  
Departmental Category: Quantitative Economics

**ECON 2010 (4) Principles of Microeconomics**

Examines basic concepts of microeconomics or the behavior and the interactions of individuals, firms and government. Topics include determining economic problems, how consumers and businesses make decisions, how markets work, and how they fail and how government actions affect markets.

**Additional Information:** Arts Sci Core Curr: Contemporary Societies  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought  
MAPS Course: Social Science

**ECON 2020 (4) Principles of Macroeconomics**

Provides an overview of the economy, examining the flows of resources and outputs and the factors determining the levels of income and prices. Explores policy problems of inflation, unemployment and economic growth.

**Additional Information:** Arts Sci Core Curr: Contemporary Societies  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought  
MAPS Course: Social Science

**ECON 3070 (4) Intermediate Microeconomic Theory**

Explores theory and application of models of consumer choice, firm and market organization, and general equilibrium. Extensions include intertemporal decisions, decisions under uncertainty, externalities, and strategic interaction.

**Requisites:** Requires prerequisite courses of ECON 2010 and ECON 1088 or MATH 1081 or MATH 1300 or MATH 1310 or MATH 1330 or (APPM 1340 and 1345) or APPM 1350 or FNCE 2010 (all min grade C-). Restricted to students with 22-180 units completed.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought

**ECON 3080 (3) Intermediate Macroeconomic Theory**

Introduces theories of aggregate economic activity including the determination of income, employment, and prices; economic growth; and fluctuations. Macroeconomic policies are explored in both closed and open economy models. ECON 3070 ECON and 3080 may be taken in any order; there is no recommended sequence.

**Requisites:** Requires prerequisite courses of ECON 2020 and (ECON 1088 or (APPM 1340 and APPM 1345) or APPM 1350 or FNCE 2010 or MATH 1081 or MATH 1300 or MATH 1310) (all min grade C-). Restricted to students with 22-180 units completed.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought

**ECON 3403 (3) International Economics and Policy**

Examines national and supranational policies that affect the international economy, with attention to trade barriers, economic nationalism and regionalism, international political economy, exchange market intervention, and international transmission of economic perturbations. Economics (ECON) majors may be approved to enroll with advisor & instructor approval and count towards the major GPA. Majors must consult with assigned ECON advisor to determine eligibility to be enrolled. May not be taken after either ECON 4413 or ECON 4423.

**Requisites:** Requires prerequisite courses of ECON 2010 and ECON 2020 (all minimum grade C-). ECON minors are allowed to be enrolled.

**Additional Information:** Arts Sci Core Curr: Contemporary Societies  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: International Trade and Finance

**ECON 3535 (3) Natural Resource Economics**

Integrates economic analysis with life science aspects of natural resource systems to develop social policies for use of natural resources. Studies economists' approaches to resources policy analysis and applies them to energy, forestry, fisheries, mineral and water systems. Economics (ECON) majors may be approved to enroll with advisor & instructor approval and count towards the major GPA. Majors must consult with assigned ECON advisor to determine eligibility to be enrolled.

**Equivalent - Duplicate Degree Credit Not Granted:** ECON 4535

**Requisites:** Requires prerequisite course of ECON 2010 (minimum grade C-). ECON minors are allowed to be enrolled.

**Additional Information:** Arts Sci Core Curr: Contemporary Societies  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Natural Resources and Environmental Economics

**ECON 3545 (3) Environmental Economics**

Highlights causes of excessive environmental pollution and tools for controlling it through economic analysis, values of preservation and distribution of costs and benefits from environmental protection programs. Economics (ECON) majors may be approved to enroll with advisor & instructor approval and count towards the major GPA. Majors must consult with assigned ECON advisor to determine eligibility to be enrolled.

**Equivalent - Duplicate Degree Credit Not Granted:** ECON 4545

**Requisites:** Requires prerequisite course of ECON 2010 (minimum grade C-). ECON minors are allowed to be enrolled.

**Additional Information:** Arts Sci Core Curr: Contemporary Societies  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Natural Resources and Environmental Economics

**ECON 3616 (3) Employment, Wages and the Future of Work**

Examines how automation, globalization and information technology are changing which jobs get done, by whom and how much they pay. Illustrates how basic labor supply and demand theory helps predict the impact of technological progress on occupational composition, income inequality and the nature of work itself. These theoretical tools also guide our search for appropriate public policy responses. Economics (ECON) majors may be approved to enroll with advisor & instructor approval and count towards the major GPA. Majors must consult with assigned ECON advisor to determine eligibility to be enrolled.

**Requisites:** Requires a prerequisite course of ECON 2010 (minimum grade C-). ECON minors are allowed to enroll.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Labor and Human Resources

**ECON 3784 (3) Economic Development and Policy**

Introductory course in Economic Development, designed for non-majors. Students are introduced to the major issues in development economics. Explores empirical, theoretical and policy issues in economic development. Emphasis is placed on the controversial issues in this literature, requiring students to explore competing, and often conflicting, perspectives of these issues. Economics (ECON) majors may be approved to enroll with advisor & instructor approval and count towards the major GPA. Majors must consult with assigned ECON advisor to determine eligibility to be enrolled.

**Requisites:** Requires prerequisite courses of ECON 2010 and ECON 2020 (all minimum grade C-). ECON minors are allowed to be enrolled.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic Development

**ECON 3818 (4) Introduction to Statistics with Computer Applications**

Introduces statistical methods and their applications in quantitative economic analysis.

**Requisites:** Requires prerequisite courses of ECON 1088 or MATH 1081 or MATH 1300 or MATH 1310 or MATH 1330 or APPM 1340/1345 or APPM 1350 or FNCE 2010 (all minimum grade C-). Restricted to students with 22-180 units completed.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4050 (3) Market Design**

Develops foundations for the modern market design practices. Economists are increasingly involved in studying and designing practical market mechanisms. Includes topics such as designing efficient matching markets (students to schools, doctors to hospitals), designing auction mechanisms (Google, Facebook, government) and designing market platforms (eBay, Amazon).

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought

**ECON 4060 (3) Choice Theory**

How do individuals make choices? In economics, it is standard to assume that individuals are rational utility maximizers. This standard model usually provides a good approximation to people's behaviors. However, we will see in this course that sometimes the standard model fails to explain people's choices. The goal of this course is to understand how individuals make choices and their implications.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-). Restricted to students with 57-180 credits (Junior or Senior).

**Recommended:** Prerequisite ECON 3080.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought

**ECON 4070 (3) Topics in Microeconomics**

Studies utility maximization under uncertainty, risk, game theory, moral hazard, and adverse selection. Applications include insurance markets and the theory of contracts.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Theory and History of Economic Thought

**ECON 4111 (3) Money and Banking Systems**

Discusses money, financial institutions and the monetary-financial system in a modern economy.

**Requisites:** Requires prerequisite course of ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Money and Banking

**ECON 4211 (3) Public Economics: the Economics of the Government Sector**

Focuses on taxation and public expenditures. Topics include economic rationale for government action, economic theory of government behavior, and effects of government policies on allocation of resources and distribution of income.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Public Economics

**ECON 4221 (3) Political and Public Choice Economics**

Explores decision-making in non-traditional market settings, specifically political market settings, using economic models. We investigate policy outcomes as the product of interactions among individuals in political markets, and analyze how governmental decisions are the result of rational optimizing behavior, even if they do not lead to policies that maximize national welfare.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Public Economics

**ECON 4231 (3) Applied Economic Analysis and Public Policy**

Applies economic analysis to current issues of public policy. Reviews basic public finance and economic justifications for government action. Examines structure and procedures of Colorado State Legislature. Chooses current legislative issues, reviews relevant economic literature and applies implications through briefing papers and testimony at legislative hearings. Explores the challenges of integrating informed economic analysis into legislative process.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Public Economics

**ECON 4242 (3) Urban Economics: The Economics of Cities**

Considers the economic forces which drive households and jobs to congregate in metropolitan areas. It then considers the forces within the city which determine how the established cities "look" - how rents vary with location, the distribution of jobs and households within a city, urban sprawl, and the sorting of households between neighborhoods. Finally it considers some government policies relating to land use and housing.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Urban and Regional Economics



**ECON 4262 (3) Economics of Crime and Corruption**

Focuses on economic models of crime and punishment, and on empirical evidence that evaluates the models. The first part of the course will introduce economic models of crime and study what factors motivate and deter criminal behavior. Then we will turn to empirical evidence and will discuss the role of higher fines, imprisonment, death penalty, abortion, drugs, guns and other factors in deterring crime. In the end of the course we will discuss corruption and whether it is harmful or beneficial to society.

**Requisites:** Requires prerequisite courses of (ECON 3070 and ECON 3818) or one of the following: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000 or STAT 4520 (all minimum grade C-).

**ECON 4292 (3) Migration, Immigrant Adaptation, and Development**

Examines historical and current patterns of migration with an emphasis in international movement. Looks at leading migration theories related to both origin- and destination-based explanations while critically looking at the role of development as a potential cause and consequence of population movement. Finally, covers some aspects of immigrants' social and economic adaptation to their host society.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Urban and Regional Economics

**ECON 4309 (3) Economics Honors Seminar 1**

For information consult the department's director of honors. Open only to qualified seniors.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3080 and ECON 3818 (all minimum grade C-). Restricted to students with 57-180 credits (Juniors or Seniors).

**Additional Information:** Arts Sciences Honors Course  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Independent Study and Other Courses

**ECON 4339 (3) Economics Honors Seminar 2**

For information consult the department's director of honors. This course does not count toward major requirements.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3080 and ECON 3818 (all minimum grade C-). Restricted to students with 57-180 credits (Juniors or Seniors).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Independent Study and Other Courses

**ECON 4413 (3) International Trade**

Focuses on theories of international trade and its impacts on economic welfare. Analyzes commercial policy, including tariffs, non-tariff barriers, retaliation, regional integration, and factor migration.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: International Trade and Finance

**ECON 4423 (3) International Finance**

Covers balance of payments; foreign exchange market, income, trade, and capital flows; asset markets adjustment mechanisms; stabilization policies in an open economy; and problems of international monetary systems.

**Requisites:** Requires prerequisite course of ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: International Trade and Finance

**ECON 4504 (3) The New Institutional Economics: Institutions, Contracts and Economic Outcomes**

Understand the conceptual tool kit of the New Institutional Economics. The concepts include transaction costs, property rights, credible commitment, and most importantly the roles of formal and informal institutions. We will examine the impact of institutions on contracting and organizations. The goal is to understand how the underlying institutions determine the degree to which societies improve their economic performance.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic History

**ECON 4514 (3) Economic History of Europe**

Covers evolution of modern economic growth and development in Europe, emphasizing institutional change.

**Requisites:** Requires prerequisite course of ECON 3070 or ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Core Curr: Historical Context  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic History

**ECON 4524 (3) Economic History of the United States**

Evolution of modern economic growth and development in the U.S. from colonial times to the present emphasizing institutional change.

**Requisites:** Requires prerequisite courses of ECON 3070 or ECON 3080 (all minimum grade C-).

**Additional Information:** Arts Sci Core Curr: United States Context  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic History

**ECON 4534 (3) Chinese Economic History in Comparative Perspective**

Surveys the economic history of China in a comparative perspective, to understand the history of economic development in China in terms of existing economic theories of growth. The approximate timeline is from the 18th century to the 20th century.

**Requisites:** Requires prerequisite courses of ECON 3070 or ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic History  
Departmental Category: Asia Content

**ECON 4535 (3) Natural Resource Economics**

Analysis of problems associated with socially optimal use of renewable and nonrenewable natural resources over time. Problems of common property resources, irreversible forms of development, and preservation of natural areas.

**Equivalent - Duplicate Degree Credit Not Granted:** ECON 3535

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Natural Resources and Environmental Economics

**ECON 4545 (3) Environmental Economics**

Examines the effects of economic growth on the environment; application of economic theory of external diseconomies, cost-benefit analysis, program budgeting, and welfare economics to problems of the physical environment.

**Equivalent - Duplicate Degree Credit Not Granted:** ECON 3545

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Natural Resources and Environmental Economics

**ECON 4555 (3) Transportation Economics and Policy**

Provides an overview of the characteristics and structure of transportation markets including aggregate demand, vehicle and mode choice, surface freight and air travel. Explores market failures in the transportation sector including market power and externalities such as pollution, congestion and accidents as well as policies aimed at addressing these issues.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Natural Resources and Environmental Economics

**ECON 4616 (3) Labor Economics**

Examines the influence of markets, unions, and government on labor allocation and remuneration. Analyzes human capital, discrimination, mobility and migration, productivity, unemployment, and inflation. Compares outcomes under competition with those in a world marked by shared market power and bargaining.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Labor and Human Resources

**ECON 4626 (3) The Economics of Inequality and Discrimination**

Examines the unique insights available through economic analysis regarding the causes, mechanisms, and consequences of inequality and discrimination. Examines the extent of inequality, the varieties and extents of discrimination, and explores the economic models that suggest explanations.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Core Curr: Human Diversity  
Arts Sci Gen Ed: Distribution-Social Sciences  
Arts Sci Gen Ed: Diversity-U.S. Perspective  
Departmental Category: Labor and Human Resources

**ECON 4646 (3) Topics in Health Economics**

Growth in health expenditures worldwide over the past three decades has led to an increase in research in health economics and its importance in public policy in developed and developing countries. The purpose of this course is to encourage students to read, think, and do research on issues in health economics. This course will cover issues that are pertinent to the US, other developed and developing countries. It will cover the basics of health economics such as health production functions and the role for government as well as touching on topical issues such as health care reform.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Recommended:** Prerequisites ECON 3818 or CSCI 3022.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Labor and Human Resources

**ECON 4697 (3) Industrial Organization and Regulation**

Explores neoclassical theory of the firm, the determinants of industrial structure, and the purposes and institutions of public policy to control or maintain a competitive environment.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Industrial Organization

**ECON 4705 (3) Managerial Economics**

Application of microeconomic principles and tools to business problems faced by decision makers. Examines decisions related to pricing, products and production, location of firms, vertical and horizontal integration, marketing, uncertainty, market structure, and government regulations and introduces key business communication, accounting and finance principles.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**ECON 4717 (3) Economics of Entrepreneurship**

Introduces economic analysis of entrepreneurship, its financing, performance and public policy issues. We will investigate in depth the business of venture capital and start-ups. Aims to understand both academic and practical implications from the burgeoning literature on economics of entrepreneurship and private equity.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Industrial Organization

**ECON 4727 (3) Economics of Organizations**

Introduces students to the economic analysis of relationship between firms and incentives within firms. The first part covers classical theories of firm boundaries and contractual relationship between firms. The second part focuses on compensation and incentive issues within firms.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Industrial Organization

**ECON 4774 (3) Topics in Economic Development, History and Political Economy**

Sustained economic growth is a relatively recent economic phenomenon that came about due to the Industrial Revolution and as a result of which the standards of living improved dramatically in the Anglo-Saxon West since the 18th century. However, global inequality has also risen to unprecedented levels because other parts of the world still significantly lag the West in economic, social and political terms. In this class, we shall study the comparative development paths of Anglo-Saxon Europe and the Middle East. In doing so, we shall primarily focus on an expansive list of influential and relevant articles published and the four books required for the class.

**Requisites:** Requires prerequisite course of ECON 3070 or ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic Development  
Departmental Category: Asia Content

**ECON 4784 (3) Economic Development**

Explores empirical, theoretical, and policy issues in economic development. Examines topics with reference to the developing countries: income distribution and poverty, demographic change, labor force employment and migration, human capital, physical capital, natural resources and the environment, industrial structure, international trade, and finance.

**Requisites:** Requires prerequisite course of ECON 3070 or ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Diversity-Global Perspective  
Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic Development  
Departmental Category: Asia Content

**ECON 4794 (3) Economic Growth**

Introduces the latest theoretical tools and synthesizes the leading explanations for economic growth processes. We examine investment, inequality, population growth, returns to education, health, technological change, and efficiency. The course also explores how fundamentals of culture, institutions, geography, history, and human characteristics may underlie the differences in comparative economic development across countries.

**Requisites:** Requires prerequisite course of ECON 3070 or ECON 3080 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Economic Development

**ECON 4797 (3) Antitrust and Regulation**

Explores two major branches of Industrial Organization--antitrust and regulation. Focus is on developing qualitative and quantitative skills for the legal-economic analysis of issues and problems across a variety of industries. Case studies are used to illustrate concepts, including mergers, collusive agreements, monopolization, and networks. Individual and group projects help develop advocacy and public speaking skills.

**Requisites:** Requires prerequisite course of ECON 3070 (minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Industrial Organization

**ECON 4808 (3) Introduction to Mathematical Economics**

Introduces the use of mathematics in economics. Topics include vectors and matrices, differential calculus, and optimization theory, with economic applications.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4818 (3) Introduction to Econometrics**

Provides undergraduate economics majors with an introduction to econometric theory and practice. Develops the multiple regression model and problems encountered in its application in lecture and individual applied projects.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4838 (3) Microcomputer Applications in Economics**

Teaches basic concepts in Java programming applied to economic models. Development of Web pages and dynamic modeling will be introduced. Students will gain a foundation that can be applied to creating advanced applications relating to analysis of statistical data and custom projects.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4848 (3) Applied Econometrics**

Introduces students to the practice of applied regression analysis. Summarizes and reviews the regression technique, explores U.S. census data sources, introduces an advanced statistical software package and provides structured exercises in regression analysis of census data. Concludes with independent research projects analyzing social and economic issues using regression analysis and census data.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or STAT 4520 or APPM 4570 or CHEN 3010 or CSCI 3022 or CVEN 3227 or MATH 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4858 (3) Financial Econometrics**

Introduces statistical models, estimation and testing procedures used in analyzing financial data for advanced undergraduates. Topics include the modeling of returns, portfolio theory, the capital asset pricing model, options pricing and fixed income securities.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Recommended:** Prerequisite ECON 4818.

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4868 (3) Simulation Modeling in Microeconomics**

Computer simulation modeling translates theory into computer code to examine questions numerically; for example, the effects of taxes or emissions permits on welfare and income distribution. We use GAMS (general algebraic modeling system); a version may be downloaded for free. Students must have access to a computer (not needed in the classroom).

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3818 or one of the following approved statistics substitutes: APPM 4570, CHEN 3010, CSCI 3022, CVEN 3227, MATH 3510, MATH 4520, STAT 3100, STAT 4000, STAT 4520 (all minimum grade C-).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Quantitative Economics

**ECON 4909 (3-4) Independent Study**

Department enforced prerequisites: completion of at least 12 hours of ECON classes and a minimum GPA of 3.00. Department consent required.  
**Repeatable:** Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

**Requisites:** Requires prerequisite courses of ECON 2010 and ECON 2020 and ECON 3070 or ECON 3080 (all minimum grade C-).

**Additional Information:** Departmental Category: Independent Study and Other Courses

**ECON 4929 (3) Special Topics In Economics**

This course number is assigned to upper-level Economics electives that become available on an incidental basis. Refer to the Economics Department for a detailed description of current content. Formerly ECON 4999.

**Repeatable:** Repeatable for up to 6.00 total credit hours.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3080 (all minimum grade C-). Restricted to students with 57-180 credits (Juniors or Seniors).

**Additional Information:** Arts Sci Gen Ed: Distribution-Social Sciences  
Departmental Category: Independent Study and Other Courses  
Departmental Category: Asia Content

**ECON 4939 (2-6) Internship/Seminar**

Offers students the opportunity to integrate theoretical concepts of economics with practical experience in economics-related institutions. The theoretical portion arises from seminars and readings, the practical from activities in organizations related to the economics field. A maximum of 3 credit hours counts toward major requirements. Department consent required.

**Requisites:** Requires prerequisite courses of ECON 3070 and ECON 3080 and ECON 3818 (all minimum grade C-). Restricted to students with 57-180 credits (Junior or Senior) Economic (ECON) majors or minors only.

**Grading Basis:** Letter Grade

**Additional Information:** Departmental Category: Independent Study and Other Courses