

ECONOMICS (ECON)

Courses

ECON 1010 (1-3) Economics in Action

Applies foundational concepts from microeconomics and macroeconomics 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 prereq ECON 1078 or MATH 1011 or MATH 1071 or MATH 1150 or MATH 1160 or APPM 1235 (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 prereq courses of ECON 2010 and (ECON 1088 or MATH 1081 or MATH 1300 or MATH 1310 or MATH 1330 or MATH 2300 or MATH 2400 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 or MATH 2300 or MATH 2400) (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 MATH 2300 or MATH 2400 or (APPM 1340 and 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 4080 (3) Economics in Action: Game Theory

Game theory studies how individuals make decisions in situations where there are strategic interactions between decision makers. It plays an important role in modern economic analysis. This course explores game theory and its applications in economics. It will review and develop methods of game theoretical analysis. Students will learn how to model and analyze economic problems in various strategic settings to gain fundamental economic insights.

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

Recommended: Prerequisite It will be expected that all students in this course are familiar with the differentiation and integration of simple functions, if you are on the waiting list and intend to enroll in the course you must attend the first-week of classes to learn whether you meet the prerequisites.

ECON 4090 (3) Markets and Morality

Examines concepts underlining the combined study of philosophy, politics, and economics. Provides an introduction to core areas of knowledge and methodologies used to understand individual behavior and the interactions that make up the social world. Topics include the moral and political dimensions of exchange and property, markets and competition, and economic growth.

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

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

This is a course in transportation economics and policy for undergraduates. Students will combine large real-world data sets with economic theory and advanced artificial intelligence tools to analyze transportation markets and policies. The course combines topics from environmental economics and industrial organization including: aggregate demand for transportation; disaggregate demand and mode choice; externality theory; intercity passenger and freight transportation; and policies such as price regulation, fuel taxes and congestion pricing. Instruction will emphasize the current literature and examples from recent policies.

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 course: 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

ECON 7010 (3) Microeconomic Theory 1

This course applies mathematical methods and optimization theory to study the foundation of modern microeconomic theory. The topics covered include theory of demand, theory of the firm, choice under uncertainty, equilibrium under alternative market structures, and welfare economics. Instructor consent required.

Additional Information: Departmental Category: Theory and History of Economic Thought

ECON 7020 (3) Macroeconomic Theory 1

This course applies the mathematical methods of continuous-time and discrete-time dynamic optimization theory and dynamical systems to study the foundation of modern macroeconomic theory. The topics covered include economic growth, the business cycle, and the determinants of consumption and investment. Instructor consent required.

Additional Information: Departmental Category: Theory and History of Economic Thought

ECON 7030 (3) Microeconomic Theory 2

Continuation of ECON 7010. Develops mathematical foundations of game theory and models of asymmetric information. Analyzes classical game-theoretic settings using analytical optimization techniques with emphasis on methodology, equilibrium concepts, theory of adverse selection and moral hazard, and principal-agent framework. Instructor consent required.

Additional Information: Departmental Category: Theory and History of Economic Thought

ECON 7040 (3) Macroeconomic Theory 2

Continuation of ECON 7020. Develops the mathematical foundations of dynamic optimization and applies numerical methods to study dynamic and stochastic general equilibrium macroeconomic models. Topics covered include the business cycle, real and nominal rigidities, search and matching frictions, and financial frictions. Instructor consent required.

Additional Information: Departmental Category: Theory and History of Economic Thought

ECON 7818 (3) Introduction to Probability and Asymptotic Theory

Introduces fundamental concepts and results from probability and asymptotic theory needed for a rigorous study of the limiting behavior of estimators and test statistics that emerge from the study of statistical/econometric models. Topics include the construction of probability measures, abstract integration, conditional expectation, stochastic convergence, laws of large numbers and central limit theorems. Instructor consent required.

Additional Information: Departmental Category: Quantitative Economics

ECON 7828 (3) Econometrics

An introduction to estimation and inference for linear and nonlinear parametric models of regression, including least squares, method of moments and maximum likelihood estimation. Instructor consent required.

Additional Information: Departmental Category: Quantitative Economics

ECON 8010 (3) Economics of Risk and Time

Develops the mathematical tools necessary to analyze optimal decision-making by individual households and firms over time and in the face of risk. This is a building block for general equilibrium models, statistical models of behavior and theoretical analyses of economic policy.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Theory and History of Economic Thought

ECON 8015 (3) Behavioral Economics

Behavioral economics is the intersection of economics with psychology. Topics may include: (1) the effects of cognitive limitations on economic decisions, (2) the effects of internal conflict, (3) nonmarket goods, including internal mental states, such as happiness, (4) survey research, including survey design and the survey measurement of preference parameters from hypothetical choices, (5) theoretical modeling of nonstandard preferences and imperfect decision-making, and (6) welfare-theoretic consequences of nonstandard preferences and imperfect decision-making.

ECON 8020 (3) Business Cycle Theory and Monetary and Fiscal Policy

Develops key skills for understanding monetary, fiscal and financial stability policy: (a) deep mathematical analysis of business cycle models, including the mechanisms within models, their comparative statics and comparative dynamics, and the difference parameter values make to the behavior of business cycle models, (b) comparing model predictions to statistical data analyses, and (c) understanding real-world policy debates.

Requisites: Restricted to graduate students only.

ECON 8030 (3) Advanced Economic Theory

This course introduces students to recent advances in economic theory. Topics include foundations of price theory, pass-through, price discrimination, differential pricing, non-linear pricing, vertical price control, imperfect information, platform markets, and consumer search. The course will focus on developing the intuition and skills to formulate research questions and to build/analyze economic models. Formerly ECON 7050.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Theory and History of Economic Thought

ECON 8209 (3) Economics Research Methods Workshop 1

Assists students starting their doctoral thesis by discussing methodology and evaluation of economic research. Presents and discusses student research proposals.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Independent Study and Other Courses

ECON 8211 (3) Public Economics 1

This course studies the theory of public economics. It presents the fundamental principles of public goods, externalities, public choice, excess burden, optimal taxation, and tax incidence. Emphasis will be placed on optimization and the development of mathematical models required for public policy analysis. The course can be taken independently or in conjunction with 8221 to make a two-semester sequence in public economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Public Economics

ECON 8219 (3) Economics Research Methods Workshop 2

Continuation of ECON 8209. Assists students starting their doctoral thesis by discussing relevant economic research. Presents and discusses research papers.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Independent Study and Other Courses

ECON 8221 (3) Public Economics 2

This course introduces the fundamental quantitative and econometric methods required for research in public economics. It explores advanced topics in public economics such as decentralization, state and local government, program analysis, cost/benefit analysis, taxation, international tax issues, political economy issues, and market failure. The course can be taken independently or in conjunction with 8211 to make a two-semester sequence in public economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Public Economics

ECON 8413 (3) International Economics 1

This course introduces students to the theories of international trade using an optimization approach. We discuss core trade theories and their empirical applications. We also explore recent advances that focus on the firm's decision to export and investigate the role of heterogeneity in firm productivity on patterns of trade. The course can be taken independently or in conjunction with 8433 to make a two-semester sequence in international economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: International Trade and Finance

ECON 8423 (3) International Macroeconomics

Explores recent advances in international macroeconomics and international finance. The course focuses on the application of the mathematical tools and quantitative analysis of dynamic macroeconomics to examine the role of international financial markets for the behavior of the current account, the international transmission of the business cycle, and the determination of exchange rates.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: International Trade and Finance

ECON 8433 (3) International Economics 2

Explores advanced quantitative topics in international economics. The course focuses on statistical analysis and structural estimation of several classes of models in international trade. The models are calibrated to the data and solutions are obtained using tools from optimization theory. The students are introduced to quantitative evaluation of trade policy instruments and welfare analysis. The course can be taken independently or in conjunction with 8413 to make a two-semester sequence in international economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: International Trade and Finance

ECON 8534 (3) History of Economic Growth - US

This course covers topics in the economic history of the United States. The course focuses on applying the tools of modern empirical economics to understand the growth of the American economy. This includes using applied econometrics and quantitative models to analyze income growth and inequality, demographic change, industrialization, international trade, capital and labor mobility, infrastructure, and technological change. The course can be taken independently or in conjunction with 8554 to make a two-semester sequence in economic history.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Economic History

ECON 8535 (3) Environmental Economics 1

Considers the allocation of society's scarce environmental resources and government attempts to achieve more efficient and equitable allocations. It is a course in applied welfare economics with an emphasis on market failure and valuation. Incorporates static and dynamic optimization techniques to formally model environmental and resource outcomes and policy instrument choice. The course can be taken independently or in conjunction with 8545 to make a two-semester sequence in environmental economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Natural Resources and Environmental Economics

ECON 8545 (3) Environmental Economics 2

Provides advanced study of current research in environmental economics and explores opportunities for new research. Instruction in empirical research including experimental design, numerical analysis, econometric and statistical approaches. Theoretical analysis of economic problems including optimization, cost/benefit analysis and economic modeling of current environmental policies. The course can be taken independently or in conjunction with 8535 to make a two-semester sequence in environmental economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Natural Resources and Environmental Economics

ECON 8554 (3) History of Economic Growth - World

Examines economic growth over the long run. Topics include the industrial revolution, the demographic transition, the great divergence, the importance of institutional change, the impacts of trade & technology diffusion, and trends in inequality & social mobility. The course highlights the use of economic modeling, the creation of new datasets, and the implementation of empirical analysis for hypothesis testing. The course can be taken independently or in conjunction with 8534 to make a two-semester sequence in economic history. Formerly ECON 8764.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Economic History
Departmental Category: Asia Content

ECON 8676 (3) Labor Economics 1

This course focuses on 1) deriving testable and quantifiable hypotheses from mathematical economic models relating to prominent policy-relevant issues in the labor market; 2) ascertaining the statistical patterns that permit identification of the parameters that govern these models; and 3) forming estimators that permit statistical inference of these parameters. The models considered are drawn from a variety of labor market contexts: static and dynamic labor supply and demand decisions, human capital investment decisions, spatial equilibrium in labor markets, and worker-firm matching with heterogeneous workers and firms.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Labor and Human Resources

ECON 8686 (3) Labor Economics 2

This course focuses on using state-of-the-art econometric techniques, often identified by natural experiments, to 1) quantify causal effects predicted by economic models of the labor market and 2) evaluate the causal impact of labor market policies. Topics include the economics of immigration, the minimum wage, the economics of discrimination, and information constraints and bounded rationality in human capital investment. As a final project, students gather data and perform initial statistical analysis to determine whether a proposed data analysis strategy will successfully lead to a credible answer to a novel causal question in labor economics.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Labor and Human Resources

ECON 8747 (3) Industrial Organization 1

This course studies the theory of industrial organization. Topics include research method in industrial organization, monopoly, oligopoly competition, vertical organization, markets with search and switching costs, online platforms, and innovation economics. Emphasis will be placed on the development of mathematical models for industry and policy analysis. The course can be taken independently or in conjunction with 8757 to make a two-semester sequence in industrial organization.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Industrial Organization

ECON 8757 (3) Industrial Organization 2

This course introduces the fundamental quantitative and econometric methods required for empirical research in industrial organization. The emphasis is on using theory to construct testable hypotheses and specifying empirical models for estimating structural parameters. Topics include differentiated products, market power, collusion, merger analysis and regulation. The course can be taken independently or in conjunction with 8747 to make a two-semester sequence in industrial organization.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Industrial Organization

ECON 8774 (3) Economic Development 1

Focuses on microeconomic issues surrounding economic development from a largely empirical perspective, emphasizing applied econometric techniques. Topics covered in the two sections will vary to keep up with the current research but this course will cover a variety of papers covering different research design and program evaluation methods on topical areas including, but not limited to, human capital development and long-run effects, environment and health, labor markets and migration, social capital and networks, micro-credit, and women's empowerment. The course can be taken independently or in conjunction with 8784 to make a two-semester sequence in economic development.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Economic Development

ECON 8784 (3) Economic Development 2

Focuses on microeconomic issues surrounding economic development from a largely empirical perspective, emphasizing applied econometric techniques. Topics covered in the two sections will vary to keep up with the current research but this course will cover a variety of papers covering different research design and program evaluation methods on topical areas including, but not limited to, distribution of resources within households, environmental and natural resources, as well as migration and gender issues relevant for developing countries. The course can be taken independently or in conjunction with 8774 to make a two-semester sequence in economic development.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Economic Development

ECON 8828 (3) Econometric Theory 1

Estimation and inference for micro-econometric models. Topics may include semi- and non-parametric econometric/statistical models; Bayesian estimation and inference; models for high dimensional data; simulation-based estimation methods. The course can be taken independently or in conjunction with 8838 to make a two-semester sequence in econometric theory.

Requisites: Requires prerequisite courses of ECON 7818 and ECON 7828 (all min grade B-). Restricted to graduate students only.

Additional Information: Departmental Category: Quantitative Economics

ECON 8838 (3) Econometric Theory 2

Estimation and inference for models for dependent data. Topics may include linear and non-linear time series, spatial and network models. The course can be taken independently or in conjunction with 8828 to make a two-semester sequence in econometric theory.

Requisites: Requires prerequisite courses of ECON 7818 and ECON 7828 (all min grade B-). Restricted to graduate students only.

Additional Information: Departmental Category: Quantitative Economics

ECON 8848 (3) Applied Microeconometrics

Presents a "user's guide" to conducting empirical research and program evaluation in applied microeconomics. Begins with a primer on an industry-standard econometric software package and a review of linear regression as a statistical technique for summarizing conditional mean relationships in data. Discusses multiple advanced econometric techniques as alternative research strategies including matching methods, difference-in-differences, panel data methods, IV, and regression discontinuity. Concludes with a research project requiring a replication and extension of an existing published paper that uses one or more of these statistical techniques.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Quantitative Economics

ECON 8858 (3) Computational and Structural Estimation Methods

Presents a "user's guide" to conducting quantitative research in computational economics. Teaches students to construct a variety of applied economic models, obtain parameter values through calibration or structural estimation techniques, and employs the resulting models to conduct policy simulations.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Quantitative Economics

ECON 8909 (1-3) Independent Study

Repeatable: Repeatable for up to 7.00 total credit hours.

Additional Information: Departmental Category: Independent Study and Other Courses

ECON 8999 (1-10) Doctoral Dissertation

All doctoral students must register for not fewer than 30 hours of dissertation credit as part of the requirements for the degree. For a detailed discussion of doctoral dissertation credit, refer to the Graduate School section.

Repeatable: Repeatable for up to 30.00 total credit hours.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Independent Study and Other Courses