

# ECONOMICS (ECON)

**\* ECON 0002b, Social Issues in America** Rebecca Toseland

This seminar investigates how data and economics can be used to understand and solve some of the most pressing contemporary social issues in the United States. Topics include equality of opportunity, education, health, climate change, criminal justice, and discrimination. In the context of these topics, the course provides an introduction to some basic economic concepts and data analysis techniques. No prior knowledge of economics or statistics is assumed. Enrollment limited to first-year students. SO

**\* ECON 1108a or b, Quantitative Foundations of Microeconomics** Tolga Koker

Introductory microeconomics with a special emphasis on quantitative methods and examples. Intended for students with limited or no experience with calculus. Enrollment limited. May not be taken after ECON 110 or 115. QR, SO

**\* ECON 1110a or b, An Introduction to Microeconomic Analysis** Staff

Similar to ECON 115, but taught as a lecture discussion with limited enrollment. Enrollment limited to first-years and sophomores. May not be taken after ECON 108 or 115. QR, SO

**ECON 1115a, Introductory Microeconomics** Cormac O'Dea

An introduction to the basic tools of microeconomics to provide a rigorous framework for understanding how individuals, firms, markets, and governments allocate scarce resources. The design and evaluation of public policy. May not be taken after ECON 108 or 110. QR, SO o Course cr

**ECON 1117a or b, Introduction to Data Analysis and Econometrics** Staff

Introduction to data analysis from the beginning of the econometrics sequence; exposure to modern empirical economics; and development of credible economic analysis. This course emphasizes working directly and early with data, through such economic examples as studies of environmental/natural resource economics, intergenerational mobility, discrimination, and finance. Topics include: probability, statistics, and sampling; selection, causation and causal inference; regression and model specification; and machine learning and big data. Prerequisites: ECON 108, 110, 115, or equivalent and familiarity with single variable calculus. Students who have taken ECON 131 may not receive major credit for this course. QR, SO o Course cr

**ECON 2121a, Intermediate Microeconomics** Evangelia Chalioti

The theory of resource allocation and its applications. Topics include the theory of choice, consumer and firm behavior, production, price determination in different market structures, welfare, and market failure. After introductory microeconomics and completion of Math 112 or higher. Elementary techniques from multivariate calculus are introduced and applied, but prior knowledge is not assumed. May not be taken after ECON 125. QR, SO o Course cr

**ECON 2122a, Intermediate Macroeconomics** Fabrizio Zilibotti

Contemporary theories of employment, finance, money, business fluctuations, and economic growth. Their implications for monetary and fiscal policy. Emphasis on empirical studies, financial and monetary crises, and recent policies and problems. After

two terms of introductory economics and completion of the Math 112 or higher. QR, SO o Course cr

**ECON 2123a, Intermediate Data Analysis and Econometrics** Costas Meghir  
Comprehensive and theoretical examination of econometrics, with further exploration of topics covered in ECON 117. A term research project addresses a research question chosen by the student, and involves the application of learned methods to a relevant data set. Prerequisites: ECON 108, 110, 115, or equivalent; ECON 117; and familiarity with single variable calculus. QR, SO o Course cr

**ECON 2135a, Introduction to Probability and Statistics** Charles Hodgson  
Foundations of mathematical statistics: probability theory, distribution theory, parameter estimation, hypothesis testing, regression, and computer programming. Recommended for students considering graduate study in economics. Prerequisites: Introductory microeconomics and MATH 118 or MATH 120 and MATH 222; or MATH 120 and MATH 225. QR, SO o Course cr

**ECON 2136b, Econometrics** Ed Vytlačil  
Continuation of ECON 135 with a focus on econometric theory and practice: problems that arise from the specification, estimation, and interpretation of models of economic behavior. Topics include classical regression and simultaneous equations models; panel data; and limited dependent variables. Recommended for students considering graduate study in economics. Prerequisites: After ECON 135 or STAT 241 and 242. May not be taken concurrently with STAT 242. QR, SO o Course cr

\* **ECON 2244a, Economics of Artificial Intelligence and Innovation** Evangelia Chalioti  
This course studies the economics of innovation and the effects of artificial intelligence on different industries. Topics include economics of the intellectual property (IP) protection system and prizes; strategic choices in innovation & competition; price discrimination; personalizing pricing and bundling; searching costs; online advertising; economics of data; the sharing and digitized economy; legal and social infrastructure. Prerequisites: Introductory Microeconomics or equivalent: Econ 115 or Econ 110 QR, SO

**ECON 2251a, Financial Economics** Eduardo Davila  
Introduction to the economic analysis of investment decisions and financial markets. Topics include time discounting, portfolio choice, equilibrium pricing, arbitrage, market efficiency, equity valuation, fixed-income securities, derivative pricing, and financial intermediation. Prerequisite: Introductory microeconomics. QR, SO o Course cr

**ECON 2259a / GLBL 2159a, Game Theory** Benjamin Polak  
An introduction to game theory and strategic thinking. Ideas such as dominance, backward induction, Nash equilibrium, evolutionary stability, commitment, credibility, asymmetric information, adverse selection, and signaling are applied to games played in class and to examples drawn from economics, politics, the movies, and elsewhere. After introductory microeconomics. No prior knowledge of game theory assumed. QR, SO o Course cr

**ECON 2270a, Health Economics and Public Policy** Howard Forman  
Application of economic principles to the study of the U.S. health care system. Emphasis on basic principles about the structure of the U.S. system, current problems,

proposed solutions, and the context of health policy making and politics. After introductory microeconomics. SO

**\* ECON 2285a / GLOBL 3237a, Global Economy** Aleh Tsyvinski

A global view of the world economy and the salient issues in the short and the long run. Economics of crises, fiscal policy, debt, inequality, global imbalances, climate change. The course is based on reading, debating, and applying cutting edge macroeconomic research. SO

**\* ECON 3226a, Discrimination in Law, Theory, and Practice** Gerald Jaynes

How law and economic theory define and conceptualize economic discrimination; whether economic models adequately describe behaviors of discriminators as documented in court cases and government hearings; the extent to which economic theory and econometric techniques aid our understanding of actual marketplace discrimination. This course was formerly listed as ECON 475. Prerequisites: introductory microeconomics and at least one additional course in Economics, African American Studies, Ethnicity, Race, and Migration, or Women's, Gender, and Sexuality Studies.

**ECON 3304a, Law and Economics in the Age of Computers** William Macleod

This course is an introduction to law and economics. It uses economic tools to explain the fundamental characteristics of contracts, torts, criminal law, and property law. These areas are fundamental to the effective functioning of all complex societies. The rapid advancement of new technologies in the 21st century requires new laws and regulations. Therefore, in addition to traditional law and economics topics, the course explores recent developments in technology regulation and estimates of the causal effects of legal changes on economic performance. In addition to the standard topics, the course discusses how new technologies – such as smart contracts, blockchain, and artificial intelligence – affect the design of legal institutions. In response to student feedback, the course consciously integrates AI tools into the weekly problem sets. The goal is to help students develop skills to use these tools effectively in their work. As Stefania Stancheva noted when accepting the 2026 John Bates Clark Medal, the goal of economics is to find policies (and hence laws) that improve people's lives, rather than policies that benefit one group at the expense of another (see <https://www.aeaweb.org/webcasts/2026/aea-awards>). Prerequisites: ECON 121 or ECON 125 and ECON 123 or ECON 135. These are required courses for economics majors. SO

**ECON 3326b, Fundamentals of Economic Development** Kaivan Munshi

The objective of this course is to examine some of the fundamental forces that shape the process of economic development. This course is divided into three sections: (i) Market Failure: with an analysis of credit, labor, and insurance markets in developing countries. (ii) Social Response: how community networks emerge in response to market failure. We study the positive and negative consequences of this community involvement for growth and development; in the short-run and the long-run. We also provide economic foundations for the emergence of social norms and identity, as well as the dynamic inefficiencies that they can generate with economic development. (iii) Biological Response: how biological adaptation to economic conditions in the pre-modern economy can have negative consequences for nutritional status and health in developing economies. Apart from providing a particular perspective on development, an additional objective of this course demonstrates the use of economic theory in informing empirical research. Prerequisites: Intermediate Microeconomics,

Introductory Econometrics and Data Analysis. Students are expected to be familiar with calculus, basic microeconomics, and basic econometrics. SO

**ECON 3350a, Mathematical Economics: General Equilibrium Theory** John Geanakoplos

An introduction to general equilibrium theory and its application to finance and the theory of money. Recommended for students considering graduate study in economics, or a career in quantitative finance. Prerequisites: After MATH 118 or 120, and intermediate microeconomics. QR, SO o Course cr

**ECON 3359b / GLBL 2383b, Games and Information** Benjamin Polak

This is designed to be a "second" game theory course. We build on the learnings from introductory game theory courses like ECON 159/GLBL 159, MGT 822 or the SOM core. The course aims to introduce important ideas and tools from game theory, and use them to answer questions in social sciences, law, and business. For instance, how does information get sold and used to persuade? How do we think about the efficiency and equity of allocations? How do sellers decide the best format for an auction to sell a good? Does requiring unanimous verdicts guarantee that the innocent will not be convicted? What causes bank runs? When do we see price wars? The underlying ideas include games of incomplete information, mechanism design, common knowledge, and high-order reasoning, and repeated games. Prerequisite: Any introductory game theory course, e.g., ECON/GLBL 159, MGT 822 or Game Theory in the SOM Core. SO RP o Course cr

**ECON 3361b, Corporate Finance** Christopher Clayton

Financial management from inside the corporation or operating entity. Topics include capital budgeting and valuation, optimal capital structure, initial public offerings, mergers, and corporate restructuring. Cases and problem sets provide applications. Prerequisites: intermediate microeconomics and econometrics. o Course cr

**ECON 3363a, The Global Financial Crisis** Andrew Metrick

Comprehensive survey of the causes, events, policy responses, and aftermath of the global financial crisis of 2007–09. Study of the dynamics of financial crises in a modern economy. Prerequisite: Successful completion of a course in introductory economics. SO

**ECON 3365a or b / CPSC 3650a or b, Algorithms** Staff

Paradigms for algorithmic problem solving: greedy algorithms, divide and conquer, dynamic programming, and network flow. NP completeness and approximation algorithms for NP-complete problems. Algorithms for problems from economics, scheduling, network design and navigation, geometry, biology, and optimization. Provides algorithmic background essential to further study of computer science. Only one of CPSC 365 or CPSC 366 may be taken for credit. Prerequisites: CPSC 202 or MATH 244, CPSC 223. QR

**ECON 3375b / GLBL 3219b, Monetary Policy** William English

Introduction to modern macroeconomic models and how to use the models to examine some of the key issues that have faced monetary policymakers during and after the global financial crisis of 2008–2009. Prerequisites: Intermediate level macroeconomics (ECON 122 or 126) and introductory econometrics. WR, SO o Course cr

**ECON 3385b, Measuring Market Power** Charles Hodgson

Theory and methods of Empirical Industrial Organization (IO), with applications to industry data. Students learn the econometric tools used by IO economists to estimate models of demand, pricing, and competition, and apply them to real data in several hands-on assignments. Topics include demand systems, monopoly and oligopoly pricing, merger analysis, productivity, and entry games. Required: ECON 1115 or ECON 1110 and ECON 1117. Students would also benefit from having taken ECON 4409, or taking it simultaneously with this course. SO

**\* ECON 4407a / GBLB 4310a, International Finance** Ana Fielor

A study of the implications of increasing integration of the world economy, through international trade, multinational production, and financial markets. Topics include foreign exchange markets, capital flows, trade and current account imbalances, coordination of monetary and fiscal policy in a global economy, financial crises and their links to sovereign debt crises and currency devaluations. Prerequisite: intermediate macroeconomics or equivalent. SO o Course cr

**ECON 4409b, Firms, Markets, and Competition** Philip Haile

Analysis of imperfectly competitive markets, focusing on the interactions among firm behavior, market structure, and market outcomes. Topics include oligopoly, collusion, predation, firm entry, advertising, and price discrimination as well as public policy implications of market behavior. After intermediate microeconomics or equivalent. QR, SO

**\* ECON 4411b, Economics of Uncertainty and Information** Soenje Reiche

Individual and collective choice in the presence of uncertainty and asymmetric information. Implications of such decision making for economic phenomena. Basic analytical tools for studying decisions under uncertainty. Asset markets, adverse selection, screening, signaling, moral hazard, incomplete contracts, bilateral trade with asymmetric information, and mechanism design. Prerequisites: intermediate microeconomics and econometrics. SO o Course cr

**\* ECON 4412a, International Environmental Economics** Samuel Kortum

Introduction to international and environmental economics and to research that combines the two fields. Methods for designing and analyzing environmental policy when economic activity and pollution cross political borders. Effects of market openness on the environment and on environmental regulation; international economics and climate change. Prerequisites: intermediate microeconomics and econometrics. SO

**\* ECON 4422a / EP&E 4301a, Modern Capitalism** Robert Yee

This course offers an introduction to the history of modern capitalism. It examines the structures, forces, and ideologies that have shaped capitalist systems in different countries over the past three centuries. Our goal is to understand how economic and political institutions have evolved in response to crises, wars, and globalization. We also plan to engage with the works of contemporary thinkers, including Rosa Luxemburg, Milton Friedman, and John Maynard Keynes. By the end of the course, students can expect to gain a broader understanding of the ideas and institutions that drive economic growth and continue to define global capitalism today. Prerequisite: Introductory Macroeconomics (ECON 1111 or ECON 1116) or equivalent; otherwise, written approval of the instructor

**ECON 4424a / GBL 4308a, Central Banking** William English

Introduction to the different roles and responsibilities of modern central banks, including the operation of payments systems, monetary policy, supervision and regulation, and financial stability. Discussion of different ways to structure central banks to best manage their responsibilities. Prerequisites: Intermediate Microeconomics, Intermediate Macroeconomics, and Introductory Econometrics. SO  
o Course cr

**ECON 4425a / CPSC 4550a, Algorithmic Game Theory** Yang Cai

A mathematically rigorous investigation of the interplay of economic theory and computer science, with an emphasis on the relationship of incentive-compatibility and algorithmic efficiency. Our main focus is on algorithmic tools in mechanism design, algorithms and complexity theory for learning and computing Nash and market equilibria, and the price of anarchy. Case studies in Web search auctions, wireless spectrum auctions, matching markets, and network routing, and social networks. Prerequisite: CPSC 3650 (formerly CPSC 365) or permission of the instructor. Familiarity with basic microeconomic theory is helpful but not required. QR

**\* ECON 4434a, Labor Economics: Inequality and Social Mobility** Orazio Attanasio

The objective of this advanced course is to study various aspects of inequality and social mobility and to understand their trends over time and their drivers. Although we briefly study some international comparisons, the focus of the course is inequality in the US and, to a less extent, the UK. We consider inequalities among different countries only tangentially. Prerequisites: ECON 121 and Econometrics. SO

**\* ECON 4437b, Financial Risk Management** Staff

This course explores financial risks faced by companies and how they identify, analyze, manage and mitigate those risks. The course touches upon risks associated with four broad topics: (1) merger or acquisition, (2) financing and capital structure, (3) company's operations, (4) benefits and costs of complicated financial instruments. Each class discusses one specific type of risk and uses a real-life situation, transaction or example to help with discussion Prerequisites: ECON 2121, ECON 2122, ECON 2251  
SO

**ECON 4438a, Applied Econometrics: Politics, Sports, Microeconomics** Ray Fair

This course has an applied econometrics focus. Topics include voting behavior, betting markets, and various issues in sports. The aim of the course is to help students prepare original empirical research using econometric tools and to read empirical papers in economics and other social sciences. Students write three empirical papers. The first can be an extension of an existing article, where some of the results are duplicated and then extended. The second is similar to the first with no example provided. The third is an original paper within the range of topics covered in the course, where data are collected and analyzed using relevant econometric techniques. Prerequisites: Two econometrics or statistics courses, one of which has to be ECON 117. Ideally, ECON 123 should also have been taken, but it is not an absolute requirement. ECON 135 and ECON 136 are substitutes for ECON 117 and ECON 123. Special permission from the instructor is needed if ECON 117 or ECON 136 has not been taken. Also required is introductory microeconomics. SO

**ECON 4439b, Applied Econometrics: Macroeconomic and Finance Forecasting** Ray Fair

This course has an applied econometrics focus. The focus is on forecasting macroeconomic and financial variables. Macroeconomic forecasting concerns forecasting variables like GDP, components of GDP like consumption, investment, and imports, inflation, the unemployment rate, interest rates, the government deficit, and exchange rates. There are various forecasting methods, some purely statistical time series techniques and some using economic theory. We consider both. Financial forecasting is more problematic, since changes in asset prices may be roughly unpredictable. We also examine topics like momentum forecasting to see if some asset prices are predictable. Prerequisites: Two courses in econometrics or statistics, or one course with special permission from the instructor. SO

\* **ECON 4442b, Health Economics** Victoria Marone

This course provides a broad overview of the field of Health Economics. Concepts are applied in the context of the U.S. healthcare system. Topics include the demand for health and healthcare, insurance market failures, healthcare provider behavior, and public policy. Students use micro-economic models to demonstrate theoretical ambiguities, evaluate empirical evidence, and understand real-world institutions. Intermediate Microeconomics SO

\* **ECON 4444a, Market Inefficiencies and the Limits of Arbitrage** Michael J Pascutti

The role of hedge funds in the United States financial markets and hedge fund behavior; understanding what hedge funds do, why they exist, and how they are different from other investment vehicles. Study of investment strategies that provide opportunity and risk for investors and study of academic papers analyzing (risky) arbitrage strategies. Prerequisite: intermediate microeconomics and econometrics. SO  
o Course cr

\* **ECON 4445b, The U.S. Banking System** Michael J Pascutti

The special functions of banks in the U.S. economy. The benefits but fragile nature of the banking system. Prerequisites: intermediate macroeconomics, microeconomics, and econometrics. SO

\* **ECON 4446a / APHY 4700a, Statistical Methods with Applications in Science and Finance** Sohrab Ismail-Beigi

Introduction to key methods in statistical physics with examples drawn principally from the sciences (physics, chemistry, astronomy, statistics, biology) as well as added examples from finance. Students learn the fundamentals of Monte Carlo, stochastic random walks, and analysis of covariance analytically as well as via numerical exercises. Prerequisites: ENAS 194, MATH 222, and ENAS 130, or equivalents. QR, SC

\* **ECON 4450b, Investment Analysis** Alex Hetherington and Chivetta Amelia

This seminar seeks to introduce the world of investment management to students, across a range of investment strategies from public stocks to private equity and real estate. The instructors, both senior members of the Yale Investment Office, the department that manages the University's \$41 billion endowment, guide class discussion in response to assigned reading and guest speaker visits. The distinguished guest speakers, including world-renowned hedge fund managers, venture capital luminaries and Yale's chief investment manager Matthew Mendelsohn '07 are at the heart of the course. These speakers join the seminar for a discussion of how their firms

approach the investment landscape and how they seek to achieve market-beating returns. Students are asked to engage with and analyze the speaker's investment strategy and to think about the strategy from the perspective of an institutional investor like Yale. Registration requires instructor permission. SO

\* **ECON 4455a, Economic Models of New Technology** Evangelia Chalioti  
Analysis of firms' incentives to innovate, focusing on the effects of market power on the intensity of innovative activity. Topics include strategic investment in innovation, patent races, the diffusion of knowledge, intellectual property (IP) protection systems, IP licensing, research joint ventures, litigation, venture capital, and conflicts between IP rights and antitrust regulation. Prerequisite: Intermediate Microeconomics or equivalent: Econ 121 or Econ 125 SO

\* **ECON 4456a, Private Equity Investing** Michael Schmertzler  
A case-oriented study of principal issues and investment types found in substantial private equity portfolios. Discussion of enterprise valuation, value creation, business economics, negotiation, and legal structure, based on primary source materials and original cases. Prerequisite: ECON 251 or ECON 252 or ECON 255. SO

\* **ECON 4465a / EP&E 4224a / GLBL 4830a, Debating Globalization** Ernesto Zedillo  
Facets of contemporary economic globalization, including trade, investment, and migration. Challenges and threats of globalization: inclusion and inequality, emerging global players, global governance, climate change, and nuclear weapons proliferation. Prerequisite: background in international economics and data analysis. Preference to seniors majoring in Economics or EP&E. SO RP

\* **ECON 4467b / ECON 467 / GLBL 4307b, Economic Evolution of the Latin American and Caribbean Countries** Ernesto Zedillo  
Economic evolution and prospects of the Latin American and Caribbean (LAC) countries. Topics include the period from independence to the 1930s; import substitution and industrialization to the early 1980s; the debt crisis and the "lost decade"; reform and disappointment in the late 1980s and the 1990s; exploration of selected episodes in particular countries; and speculations about the future. Prerequisites: intermediate microeconomics and macroeconomics. SO

\* **ECON 4468b, Institutions and Incentives in Economic Development** Mark Rosenzweig  
Assessment of alternative policies and programs designed to promote economic development; examination of fundamental problems of underdeveloped areas and consideration of how and whether such programs resolve them. The roles of indigenous institutions in low-income countries in alleviating problems of underdevelopment. Prerequisites: intermediate microeconomics and econometrics. SO

\* **ECON 4491a and ECON 4492b, The Senior Essay** Staff  
The senior essay is an opportunity for a student to engage in independent economic research. The essay should not be merely a review of the literature, but must contain original research and/or analysis aimed at examining a hypothesis using the tools of economics. The essay can be theoretical, empirical or computational. The senior essays that receive A's and are awarded prizes are typically those that use economics tools (and, where appropriate, data) to offer fresh insights on questions. The senior essay is optional, but it is required for consideration for Distinction in the Major (for both Economics and Econ&Math). Students enrolling in this one-term course need to find

an advisor. There are no page requirements or formatting requirements. 1 credit for Yale College students Two econometrics courses (or ECON 135 plus one econometrics course). The second econometrics course can be taken Cr/D/F, and can be taken in the fall of senior year. The econometrics courses that qualify are only ECON 117, ECON 123 and ECON 136, in addition to 400-level applied econometrics courses (ECON 419, ECON 438 and ECON 439).

\* **ECON 4498a and ECON 4499b, Directed Reading** Giovanni Maggi

Junior and senior economics majors desiring a directed reading course in special topics in economics not covered in other graduate or undergraduate courses may elect this course, not more than once, with written permission of the director of undergraduate studies and of the instructor. The instructor meets with the student regularly, typically for an hour a week, and the student writes a paper or a series of short essays. Junior and senior majors may take this course for a letter grade, but it does not meet the requirement for a department seminar. The application form may be found here: <https://economics.yale.edu/undergraduate/forms-documents>