Department of Economics

Chair
• John List

Professors
• Fernando Alvarez
• Stéphane Bonhomme
• David W. Galenson
• Michael Greenstone
• Lars Peter Hansen
• James J. Heckman
• Ali Hortaçsu
• Steven Levitt
• John List
• Casey Mulligan
• Kevin M. Murphy
• Roger B. Myerson
• Derek A. Neal
• Philip J. Reny
• Azeem Shaikh
• Robert Shimer
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• Ufuk Akcigit
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• Brent Hickman
• Rafael Lopes de Melo
• Doron Ravid
• Lawrence Schmidt
• Richard Van Weelden
• Alessandra Voena
• E. Glen Weyl

Senior Lecturers
• Victor O. Lima
• Allen R. Sanderson
• Grace Tsiang
Department of Economics

Lecturers
- Sebastien Gay
- Melissa Tartari
- Kotaro Yoshida

Emeritus Faculty
- Arnold C. Harberger
- Robert E. Lucas, Jr.
- Hugo F. Sonnenschein
- Lester G. Telser
- George S. Tolley

Chicago is a particularly innovative department of economics. The proportion of new ideas in economics that have emanated from or become associated with Chicago over the last forty years is astonishing. Any definition of the Chicago School would have to find room for the following ideas (in chronological order from the 1940s to the present): the economic theory of socialism, general equilibrium theory, general equilibrium models of foreign trade, simultaneous equation methods in econometrics, consumption as a function of permanent income, the economics of the household, the rationality of peasants in poor countries, the economics of education and other acquired skills (human capital), applied welfare economics, monetarism, sociological economics (entrepreneurship, racial discrimination, crime), the economics of invention and innovation, quantitative economic history, the economics of information, political economy (externalities, property rights, liability, contracts), the monetary approach to international finance, rational expectations in macroeconomics, and mechanism design. The unifying thread in all this is not political or ideological but methodological, the methodological conviction that economics is an incomparably powerful tool for understanding society.

The Department of Economics offers a program of study leading to the Ph.D. degree. A general description of the program is given below. For a more detailed explanation of the program requirements, as well as complete course descriptions and faculty bios, see the information for current students on our website at: http://economics.uchicago.edu/graduate/.

The Department of Economics has no master’s-level courses and does not admit students who intend to do only a master’s degree. Ph.D. students may apply for and receive a master’s degree after completion of a set of courses and examinations that they have taken as part of the doctoral program.

ADMISSIONS AND FINANCIAL AID

PREREQUISITES AND PREPARATION FOR GRADUATE STUDY

Each autumn, the Department of Economics enrolls an entering class of approximately twenty-five graduate students who come from many countries around the world, and have been selected from a large and diverse group
of applicants. Admission to graduate study requires a bachelor’s degree (or equivalent). This degree need not be in economics, although some background in economics is certainly desirable. There are no formal course requirements for admission, but a strong background in mathematics is important. At the Ph.D. level, the study of economics requires an absolute minimum of one year of college calculus and a quarter (or semester) each of both matrix algebra and mathematical statistics (that is, statistics using calculus, as distinct from introductory statistics for social science). Prospective students who lack this preparation and have remaining free time in their undergraduate schedules are urged to take these courses before beginning graduate study.

Beyond these basic prerequisites, many of our applicants have taken other advanced mathematics courses, such as real analysis, have completed some graduate-level classes in economics or related fields, or have had some other significant exposure to research in economics. Many strong applicants have ranked at or near the top of their graduating class.

**ADMISSIONS PROCESS**

Given the year long sequence of courses, all new students must begin their study in the Autumn Quarter. The application process for admission and financial aid for Economics and all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines, and department specific information is available online at: https://apply-ssd.uchicago.edu/apply/ . Most required supplemental material can be uploaded into the application.

Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and those materials that cannot be uploaded into the application should be mailed to:

The University of Chicago  
Division of Social Sciences Admissions Office  
Foster 105  
1130 East 59th Street  
Chicago, IL 60637

All applicants are required to submit scores from the Graduate Record Examination (GRE) General Test. Foreign applicants whose native language is not English must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The current University minimum score requirements are provided with the application.

**CRITERIA FOR ADMISSIONS**

The Committee on Admissions takes account of a wide range of factors to evaluate each applicant: the previous educational record, letters of recommendation, writing sample, previous research experience, the applicant’s scores on the GRE (General Test) and the TOEFL or IELTS, the compatibility of the applicant’s research interests with the program strengths in the department, and any special factors that the
applicant may bring to the committee’s attention. The committee evaluates each applicant on the basis of all material available; no arbitrary cut-offs in terms of a student’s grade point average or test scores are used. Applications must be complete for the January review, including scores from the GRE and TOEFL or IELTS if appropriate. These exams should be taken no later than November 1. In deciding when to register for the exams, applicants should particularly note our yearly cycle in order to assure that their applications receive full consideration.

**PROGRAM OF STUDY**

The program of study for the Ph.D. degree in Economics includes courses and comprehensive examinations in the three “Core” subjects of Price Theory; the Theory of Income, Employment, and the Price Level; and Quantitative Methods. In addition to the Core, Ph.D. requirements include demonstration of competence in two Specialized Fields of concentration, courses in three elective Fields for the General Distribution requirement, a Research Paper, the approval of a Thesis Proposal, and the completion of the Doctoral Thesis.

The usual load is three courses per quarter for two years; this permits completion of nine courses during the regular academic year of three quarters. The comprehensive examination for the Core subjects is given in the Summer Quarter. An examination in each Specialized Field of concentration is given once a year.

Ph.D. students may request permission to choose electives outside the Department of Economics for Field or General Distribution requirements. Satisfactory grades on course work done at the graduate level at another institution may also be used to satisfy part of the course requirements for General Distribution by petition to the Director of Graduate Studies.

With good preparation, students normally take five years to complete the Ph.D. Students who begin with the intention of obtaining the Ph.D. but who change their plans or fail to satisfy the Ph.D. requirements will in most cases be eligible for a M.A. degree.

The program of a typical Ph.D. student consists of the following sequence: in the first year, courses in price theory, the theory of income, and quantitative methods prepare the student for the Core examinations which are taken in the following summer; in the second year, courses and participation in workshops prepare the student for certification in two Specialized Fields (one by exam and one by GPA or exam) and help the student identify a Research Paper topic; in the third and fourth years, the student completes his/her Research Paper and General Distribution requirements, participates in workshops, formulates a thesis topic, and presents a Thesis Proposal Seminar at which the faculty formally approves the topic and admits the student to candidacy; in the fifth year, the student completes his/her Doctoral Thesis and gives a Public Lecture.
COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://economics.uchicago.edu/graduate/

JOINT PH.D. PROGRAM IN FINANCIAL ECONOMICS

The joint Ph.D. program in Financial Economics was established in the 2006-07 academic year and is run jointly by the Department of Economics in the Division of the Social Sciences and by the University of Chicago Booth School of Business (formerly the GSB). The aim of this program is to exploit the strengths of both sponsors in training Ph.D. students interested in financial economics. Core economics training is valuable for students seeking to do research in financial economics, and advances in financial economics have important spillovers to other areas of economics. It has long been a tradition in the Department of Economics to feature core economics training for their Ph.D. students, and the Booth School has a well recognized excellence in finance. Students in the joint program benefit from broad sets of instructors and classmates in both the Economics Department and the Booth School. They also hold an official status and are able to utilize resources in both Economics and the Booth School.

Upon completion of this program, students will be awarded a Doctor of Philosophy degree in Economics and Finance jointly from the Division of the Social Sciences and the Booth School.

PROGRAM ELEMENTS

Students must satisfy the requirements for the Ph.D. degree in both programs. This is viable because of the considerable overlap in what the two programs expect of their students.

ADMISSIONS

Admission to the joint program requires admission to both the doctoral program in the Department of Economics and to the doctoral program in the Booth School, but interested parties need only apply to one or the other program. Students may enter the joint program at the beginning of their doctoral studies. Those seeking admission to the joint program should apply online to either the Ph.D. program in the Department of Economics or the Booth School.

Students enrolled in doctoral studies in either the Economics Department or the Booth School may apply to the joint program at any time within their first two years in residence. Such students will still have to meet all of the requirements of both programs.

Enrollment and financial aid throughout a student’s matriculation in the joint program will be administered by either the Division of the Social Sciences or the Booth School, as arranged by the two units. This designation will be for
administrative purposes only and will not have programmatic implications. If a student’s interests change, the Director of the Ph.D. program in the Booth School and the Dean of Students for the Social Sciences will facilitate transfers out of the joint program and into the doctoral program in Economics or Business.

ECONOMICS COURSES

ECON 30100. PRICE THEORY I. 100 Units.
Theory of consumer choice, including household production, indirect utility, and hedonic indices. Models of the firm. Analysis of factor demand and product supply under competitive and monopolistic conditions. Static and dynamic cost curves, including learning by doing and temporary changes. Uncertainty applied to consumer and producer choices. Property rights and the effects of laws. Investment in human and physical capital.
Instructor(s): Kevin Murphy Terms Offered: Autumn
Equivalent Course(s): LAWS 43611

ECON 30200. PRICE THEORY II. 100 Units.
The first five weeks of this course are a continuation of ECON 30100, Price Theory I. The second half of the course will be devoted to the Walrasian model of general competitive equilibrium as developed by Arrow and Debreu. This will begin with a brief development of the consumer and producer theories, followed by the welfare theorems connecting equilibria and optima and a treatment of the classical existence of equilibrium theorem. The core of an economy, a limit theorem relating the core to the set of competitive equilibria, and models in which agents are small relative to the market will also be considered. Finally we will study general equilibrium under some alternative assumptions; such as, informational asymmetries and rational expectations equilibrium, public goods and Lindahl equilibrium, financial general equilibrium and asset pricing.
Instructor(s): Phil Reny and Roger Myerson Terms Offered: Winter
Equivalent Course(s): LAWS 43621

ECON 30300. PRICE THEORY III. 100 Units.
The course begins with expected utility theory, and then introduces the fundamental ideas of game theory: strategic-form games, Nash equilibrium, games with incomplete information, extensive-form games, and sequential equilibrium. Then the course will focus on the effects of informational asymmetries in markets and the problems of moral hazard and adverse selection. Topics include: optimal risk sharing, signaling and screening in competitive markets, principal-agent problems, strategic and informational incentive constraints, incentive efficiency, and mechanism design for auctions and bilateral trading.
Instructor(s): Phil Reny and Balazs Szentes Terms Offered: Spring
ECON 30400. INTRODUCTION TO MATHEMATICAL METHODS IN ECONOMICS. 000 Units.
This optional three-week course for incoming graduate students meets September 4 through September 21 2012 and introduces some basic mathematical concepts used in economic theory: a "briefing" of the math students will encounter in the Core classes. Emphasis is placed on problem-solving, but also on some fairly abstract math you might not see otherwise. Cooperative work is strongly encouraged. Instructor(s): Staff Terms Offered: August 31st - September 18, 2015 Prerequisite(s): Econ PhD students only

ECON 30501. TOPICS IN THEORETICAL ECONOMICS. 100 Units.
Some of the topics covered in this course are: Nash equilibrium existence in discontinuous games, existence of monotone pure strategy equilibria in Bayesian games, defining sequential equilibrium in infinite extensive form games, efficient auction design, correlated information and mechanism design. Instructor(s): Phil Reny Terms Offered: Winter

ECON 30701. EVOLUTIONARY GAME THEORY. 100 Units.
The goal of this course is to give an introduction to Evolutionary Economics with a particular focus on the evolution of preferences. The topics covered in this course include altruism, risk-preferences, discounting, happiness and social norms. Instructor(s): Balazs Szentes Terms Offered: Spring

ECON 31000. EMPIRICAL ANALYSIS I. 100 Units.
This course introduces students to the key tools of econometric analysis. It covers basic OLS regression model, generalized least squares, asymptotic theory and hypothesis testing for maximum likelihood estimation, extremum estimators, instrumental variables, decision theory and Bayesian inference. Instructor(s): Azeem Shaikh Terms Offered: Autumn

ECON 31100. EMPIRICAL ANALYSIS II. 100 Units.
This course develops methods of analyzing Markov specifications of dynamic economic models. Models with stochastic growth are accommodated and their properties analyzed. Methods for identifying macroeconomic shocks and their transmission mechanisms are developed. Related filtering methods for models with hidden states are studied. The properties estimation and inference methods based on maximum likelihood and generalized method of moments are derived. These econometric methods are applied to models from macroeconomics and financial economics. Instructor(s): Lars Hansen Terms Offered: Winter
ECON 31100. EMPIRICAL ANALYSIS II. 100 Units.
This course develops methods of analyzing Markov specifications of dynamic economic models. Models with stochastic growth are accommodated and their properties analyzed. Methods for identifying macroeconomic shocks and their transmission mechanisms are developed. Related filtering methods for models with hidden states are studied. The properties estimation and inference methods based on maximum likelihood and generalized method of moments are derived. These econometric methods are applied to models from macroeconomics and financial economics.
Instructor(s): Lars Hansen Terms Offered: Winter

ECON 31200. EMPIRICAL ANALYSIS III. 100 Units.
The course will review some of the classical methods you were introduced to in previous quarters and give examples of their use in applied microeconomic research. Our focus will be on exploring and understanding data sets, evaluating predictions of economic models, and identifying and estimating the parameters of economic models. The methods we will build on include regression techniques, maximum likelihood, method of moments estimators, as well as some non-parametric methods. Lectures and homework assignments will seek to build proficiency in the correct application of these methods to economic research questions.
Instructor(s): Stéphane Bonhomme Terms Offered: Spring

ECON 31330. Structural Dynamic Modeling: Discrete Choice. 100 Units.
The course will introduce the students to the specification, solution, identification, and estimation of discrete choice dynamic programming (DCDP) models. The development of estimation methods for DCDP models has opened new frontiers for empirical research in labor economics, industrial organization, marketing, health economics, development economics, economic demography, and political economy.
Instructor(s): J. Joensen Terms Offered: Autumn

ECON 31710. Identification in Nonlinear Econometric Models. 100 Units.
This course is about parameter identification in econometric models with nonlinearities. Identification is a fundamental concern when using statistical methods to address economic questions. Nonlinearities arise frequently in econometric models as a result of unobserved heterogeneity, discrete response, selection, censoring, and other related empirical concerns. The course will cover both classical results and recent advances. Both point and partial identification approaches will be discussed. The focus of the course will be on results that have had (or may in the future have) an impact on the way empirical work is conducted and interpreted.
Instructor(s): A. Torgovitsky Terms Offered: Spring
ECON 32000. TOPICS IN AMERICAN ECONOMIC HISTORY. 100 UNITS.
Economic analysis is applied to important issues in American economic history. Specific topics vary, but may include the following: the economics of colonization, the transatlantic slave trade, the role of indentured servitude and slavery in the colonial labor market, the record and sources of 19th-century economic growth, economic causes and effects of 19th-century immigration, the expansion of education, the economics of westward migration, determinants of long-run trends in the distribution of income and wealth, the quantitative analysis of economic and social mobility, and the economics of racial discrimination in the twentieth-century South.
Instructor(s): D. Galenson Terms Offered: Winter
Equivalent Course(s): ECON 22200

ECON 33000. THE THEORY OF INCOME I. 100 UNITS.
This course will use dynamic general equilibrium models to study macroeconomic questions. The first half of the quarter will focus on applications of the neoclassical growth model, including variants useful for studying the effects of capital, labor, and consumption taxes; the effects of general and investment specific technical change; the role of human capital accumulation, and the q-model of investment. On the technical side, this part of the course will rely heavily on the tools of optimal control theory (Hamiltonians) and on the First and Second welfare theorems.
The second part of the course will focus on applications of stochastic dynamic programming. On the substantive side, particular topics include models of job search and asset pricing; models with idiosyncratic (insurable) and aggregate (uninsurable) risk; and dynamic tax smoothing. On the technical side, this part of the course will rely heavily on Bellman equations and other recursive modeling techniques.
Instructor(s): Fernando Alvarez Terms Offered: Autumn

ECON 33100. THE THEORY OF INCOME II. 100 UNITS.
This course will explore a variety of macroeconomic models in which the welfare theorems do not necessarily hold, including overlapping generations models, equilibrium models with labor market search and matching frictions, economies with sticky prices and sticky wages, and environments in which money facilitates exchange. We will also explore the role of government policy within these models, including optimal taxation, optimal monetary policy, and the time consistency of these policies. If time permits, we will look at environments with non-convex adjustment costs, such as irreversible investment and fixed costs of changing prices.
Instructor(s): Robert Shimer Terms Offered: Winter
ECON 33200. THE THEORY OF INCOME III. 100 Units.
The course shares with the other two Theory of Income courses the objectives of (1) explaining human behavior as evidenced by aggregate variables and (2) predicting the aggregate effects of certain government policies. Economics 33200 considers some of the prevailing business cycle theories, and their application to the recession of 2008-9. Some hypotheses to be considered are the q-theory of housing investment, the neoclassical approach to fiscal policy, and whether government spending has a “multiplier.” The course confronts several empirical issues that are also encountered outside the field of macroeconomics such as the construction of aggregate data, choice of data set, and the measurement of expectations.
Instructor(s): Casey Mulligan Terms Offered: Spring

ECON 33530. Firm Dynamics and Economic Growth. 100 Units.
This class focuses on the theory and empirics of economic growth. The class will follow a micro-to-macro approach and hence special emphasis will be given to firms and inventors to uncover the determinants of aggregate productivity growth. In addition to some classic papers, the class will mainly focus on recent research. Students will be encouraged to discuss the frontier topics in class and produce new and exciting research ideas.
Instructor(s): U. Akcigit Terms Offered: Autumn

ECON 34430. Topics in Labor Markets: Earnings and Employment. 100 Units.
The class will cover recent developments in the understanding of the determinants of employment and earnings in the labor market. We will start by studying extensive and intensive labor supply decisions in the short and long run and their implications for macro and micro elasticities. We will then look at the effect of uncertainty in earnings by studying the joint dynamics of earnings and consumption. The next section is concerned with labor demand and in particular how skills demand has impacted inequality. Finally, the course will cover models with two-sided heterogeneity with complementarities, sorting and mobility frictions. The methods presented in the course will range from nonparametric econometrics methods to solving equilibrium and dynamic contracting problems. Students should expect to learn how to work with data and how to develop, solve and evaluate structural models of the labor market.
Instructor(s): T. Lamadon Terms Offered: Winter

ECON 34600. Applied Job Search Models. 100 Units.
This course will provide an introduction to the theory and micro econometric applications of job search with a specific focus on understanding the sources of wage dispersion across workers, wage dynamics across dates and wage profiles over a worker’s life cycle. Special emphasis will be placed on methods to combine worker-, firm-, and matched worker/firm panel data with structural job search models to describe and explain real-life phenomena and to provide structural tools for quantitative policy analysis.
Terms Offered: Autumn
Note(s): J. Lise
ECON 35101. INTERNATIONAL MACROECONOMICS & TRADE. 100 Units.
This course is the first in a three course sequence on international economics. The first part is reserved to international trade and will involve a mix of theory, data, and computation. After studying the workhorse models (including classical models of trade, models with increasing returns and monopolistic competition, and recent models with heterogeneous firms), we will cover their recent quantitative applications. The second part is on international macroeconomics and focuses on international relative prices and exchange rates. In particular, we will cover price-related puzzles, such as PPP puzzle and exchange rate disconnect, study the recent work on incomplete pass-through and pricing-to-market, as well as models of real and nominal exchange rate under flexible and sticky prices.
Instructor(s): Ralph Ossa Terms Offered: Autumn
Equivalent Course(s): BUSF 33946

ECON 35301. INTERNATIONAL TRADE AND GROWTH. 100 Units.
This course is the last in a three course sequence on Economic Growth and International Trade. We will focus on recent research related to trade, growth, and technology diffusion. Papers by Eaton and Kortum, Alvarez, Buera, Lucas, Prescott, McGrattan and Jovanovic will be reviewed, as well as work by Sachs and Warner, Stokey, Grossman and Helpman, Rossi-Hansberg, and Klenow and Rodriguez-Clare.
Instructor(s): Robert Lucas Terms Offered: Spring

ECON 36101. ECONOMIC MODELS OF POLITICS. 100 Units.
This course is an introduction to current research in political economics. The emphasis is on game-theoretic models that can be used to study the effects of different constitutional structures on the competitive behavior of politicians and the welfare-relevant performance of government.
Instructor(s): Roger Myerson and Richard van Weelden Terms Offered: Winter
ECON 38900. THEORY OF FINANCIAL DECISIONS I. 100 Units.
This course is concerned with models for portfolio decisions by investors and the pricing of securities in capital markets. The material is covered in a rigorous analytical manner, although formal technical requirements are minimal. The reading list is extensive. The expectation is that the average student spends 15+ hours per week on the course, outside of class. Grades are based on weekly take-home exam questions, about five problem sets, and a term paper. Class participation (I cold call) is also used to determine grades. Cannot be taken pass/fail or audited.
This course is intended for (i) first-year Booth Ph.D. students with no finance and (at best) undergraduate economics and statistics backgrounds, and (ii) second-year MBA students with rather minimal economics and statistics backgrounds. Students with stronger backgrounds in economics and statistics are likely to find the pace of the course, and the exam and problem set requirements, somewhat tedious. Such students are better served by the Booth Ph.D. Asset Pricing courses offered by Cochrane, Constantinides, and Heaton.
Instructor(s): Eugene Fama Terms Offered: Autumn
Prerequisite(s): Written proof of permission from the Instructor to enroll in this class is required at the time of registration. Attendance at the first class is mandatory.
Equivalent Course(s): BUSF 35901

ECON 39001. THEORY OF FINANCIAL DECISIONS II. 100 Units.
This course provides a theoretical and empirical treatment of major topics in corporate finance, including: capital structure and financial contracting; investment decisions; bankruptcy; and the market for corporate control. The course is designed for Ph.D. students interested in corporate finance. Grades will be based on problem sets, referee reports, and a final examination.
Instructor(s): Zhiguo He Terms Offered: Winter
Prerequisite(s): ECON 38900 / BUSF 35901
Equivalent Course(s): BUSF 35902
ECON 39101. ASSET PRICING. 100 Units.
In this course, we develop the theory of financial markets. Topics: review of mean-variance portfolio theory and the CAPM; arbitrage and state prices; the arbitrage pricing theory (APT); intertemporal consumption-investment decisions; the intertemporal capital asset pricing model (ıCAPM) and the intertemporal APT; the econometrics of multifactor models; present value relations; equilibrium asset pricing models and the equity premium puzzle; explanations based on preferences, incomplete markets, imperfect markets, and rare events; introduction to stochastic calculus; option pricing; intertemporal consumption-investment decisions and asset pricing in continuous time; the term structure of interest rates.
Grades will be based on class participation, homework, and a final examination in class. Students are expected to read the assigned materials in advance, participate in the class discussion, and work on extensive problem sets.
Instructor(s): George Constantinides Terms Offered: Autumn
Prerequisite(s): BUSF 35100 and BUSF 35901
Equivalent Course(s): BUSF 35912

ECON 39200. TOPICS IN EMPIRICAL FINANCE. 100 Units.
The central question of empirical finance is "what are the real sources of aggregate risk that determine asset prices?" This course focuses on current topics in empirical finance that address this question. It explores this question by providing a synthesis of asset pricing and macroeconomic theory. The emphasis is on the stochastic discount factor framework for thinking about asset pricing, and the course spends some time exploring this framework and relating it to traditional expected return-beta statements of asset pricing models. Methods for analyzing the term structure of risk exposures and prices across alternative investment horizons are developed. Econometric challenges are explored. Finally, the effects of investor preferences and individual heterogeneity and frictions in asset markets on equilibrium stochastic discount factors are analyzed.
Instructor(s): TBD Terms Offered: Winter
Equivalent Course(s): BUSF 35905
ECON 39400. THEORY OF FINANCIAL DECISIONS III. 100 Units.
We plan to cover three broad topics in this course: (1) theory of the firm; (2) the development of financial markets and its effects on real markets; and (3) financial intermediaries. We will start by trying to understand why firms exist. This will naturally lead on to questions about their organizational and control structures and about the way they are financed. Financial intermediaries play a key role in financing and we will attempt to understand why they are useful. Among the topics we will examine are the effects of financial contracts and intermediaries on incentives, commitment, and the liquidity of markets and the chance of a financial crisis.

This course is intended for Ph.D. students and advanced M.B.A. students who have a substantial understanding of formal economics and some basic game theory. Grades will be based on problem sets, referee reports and a final examination. Instructor(s): Amit Seru and Amir Sufi Terms Offered: Spring
Prerequisite(s): ECON 39001 / BUSF 35902. A solid background in advanced microeconomics is highly recommended.
Equivalent Course(s): BUSF 35903

ECON 39620. Liquidity. 100 Units.
This is a course on monetary economics, defined as the study of frictional markets where there is a role for assets in facilitating exchange. The simplest example is money, but other assets can facilitate exchange through their use as media of exchange or as collateral in secured credit arrangements. There is also a role for banking. We will study a variety of theoretical environments sharing salient features. There will be some discussion of data, too, including calibration of various models, the effects of monetary policy on asset and labor markets, and the cost of inflation.
Instructor(s): R. Wright Terms Offered: Autumn

ECON 39802. ADVANCED LAW AND ECONOMICS. 100 Units.
This seminar examines theoretical and empirical work in the economic analysis of law. It will cover, among other things, optimal tort rules, models of contract liability and remedies, optimal criminal rules, settlement and plea bargaining, and models of judicial behavior. Familiarity with calculus and either advanced undergraduate microeconomics or graduate microeconomics is expected. Grades will be based on class participation and a series of research paper proposals.
Instructor(s): Anup Malani Terms Offered: Spring
Equivalent Course(s): LAWS 55401
ECON 40101. ADVANCED INDUSTRIAL ORGANIZATION I. 100 Units.
This two-quarter sequence is part of the Industrial Organization Specialized Field taught jointly at the Ph.D. level in the Department of Economics and the Booth School of Business. Topics include modeling consumer demand, production function estimation, static and dynamic models of imperfect competition, pricing strategies, theory of the firm and organizational design. Recent theoretical and empirical approaches are emphasized.
Instructor(s): Chad Syverson Terms Offered: Autumn
Prerequisite(s): PQ: Solid background in first year Ph.D. level microeconomics and econometrics, e.g., ECON 30100, 30200, or 30300 and ECON 31000, 31100, or 31200.
Equivalent Course(s): BUSF 33921

ECON 40201. ADVANCED INDUSTRIAL ORGANIZATION II. 100 Units.
This two-quarter sequence is part of the Industrial Organization Specialized Field taught jointly at the Ph.D. level in the Department of Economics and the Booth School of Business. Topics include modeling consumer demand, production function estimation, static and dynamic models of imperfect competition, pricing strategies, theory of the firm and organizational design. Recent theoretical and empirical approaches are emphasized.
Instructor(s): Ali Hortacsu Terms Offered: Winter
Prerequisite(s): PQ: Solid background in first year Ph.D. level microeconomics and econometrics, e.g., ECON 30100, 30200, or 30300 and ECON 31000, 31100, or 31200.
Equivalent Course(s): BUSF 33922

ECON 40301. ADVANCED INDUSTRIAL ORGANIZATION III. 100 Units.
This course will complement the other courses in the Ph.D. sequence for industrial organization and will focus on topics closely related to antitrust economics and regulation. Topics will include optimal price discrimination, bundling, tie in sales, price fixing, two sided markets including credit cards, the theory of optimal regulation, and the empirical facts of regulation. The course is primarily for PhDs in economics and business, but advanced law students interested in antitrust and regulation plus advanced and interested MBAs are welcome.
Instructor(s): Dennis Carlton Terms Offered: Spring
Equivalent Course(s): BUSF 33923, LAWS 99304

ECON 40401. Advanced Industrial Organization IV. 100 Units.
This course covers modern empirical work in industrial organization, with a particular focus on structural estimation of parameters in economic models of consumer and firm behavior. This course counts as one of the three needed to complete the field.
Instructor(s): B. Hickman Terms Offered: Spring
ECON 40701. TOPICS IN MATCHING AND MARKET DESIGN. 100 Units.
This course is a reading seminar on the theory and practice of market design. The first few weeks will introduce the field and its technology; subsequent weeks will discuss recent papers alongside their classical antecedents. In addition to technical content, class discussion will pay special attention to issues of problem identification and formulation, so as to understand what comprises “interesting” work in market design. Topics may include: spectrum reassembly, cadet-branch matching, affirmative action, large-market matching, kidney exchange chains, real property, and the design of dating websites.
Instructor(s): Scott Kominers Terms Offered: Spring

ECON 40801. INTRODUCTION TO THEORY-BASED EMPIRICAL METHODS WITH APPLICATIONS TO MARKET DESIGN. 100 Units.
This course will concentrate on identification and estimation of static models related to market design, but may also serve as an introduction to structural research in general. As a rough outline, the first segment will cover single-object auction models, the second segment will cover multi-object auction models, and the final segment will cover related settings including contracts, adverse selection models, rank-order contests, and matching markets. Lectures will briefly cover theoretical background of various models so as to facilitate an in-depth discussion of topics such as model identification within different informational environments, unobserved heterogeneity, estimation techniques, and counterfactual experiments. Class assignments will include empirical exercises, a referee report, and in-class presentations on recent research of interest to class members.
Instructor(s): Brent Hickman Terms Offered: Autumn

ECON 41100. Experimental Economics. 100 Units.
This course provides the necessary tools to be an avid consumer of the experimental literature and instructs students on how to become a producer of that literature. Topics include a summary of recent experimental findings and details on how to gather and analyze data using experimental methods.
Instructor(s): Staff Terms Offered: Spring
Prerequisite(s): ECON 20100
Equivalent Course(s): ECON 21800

ECON 42800. Creativity. 100 Units.
This seminar examines recent research on how creative people innovate in a wide range of intellectual activities. The main project for the course is a term paper that analyzes the creative life cycle of one or more innovators of the student’s choice, using both quantitative and qualitative evidence. Students present their research in progress for discussion. The seminar is designed to give students all the tools needed to do this research, including choosing a subject, finding and using an appropriate data set, and negotiating the relevant scholarship.
Instructor(s): D. Galenson Terms Offered: Winter
Prerequisite(s): ECON 19800 or consent of instructor
Equivalent Course(s): ECON 22650
ECON 42900. Innovators. 100 Units.
Economists believe that innovation is a primary source of economic growth. Yet although most innovations are made by individuals or small groups, until recently economists have not studied how those exceptional people produce their discoveries. Recent research has shown that there are two very different types of innovators, who have different goals and follow different processes. This course surveys this research, examining the careers and innovations of important practitioners in a range of modern arts, including painters, novelists, sculptors, poets, movie directors, photographers, songwriters, and architects, as well as entrepreneurs and scientists. The material covered in this course adds a new dimension to our understanding of creativity and of how innovators in many different activities produce new forms of art and science.
Instructor(s): D. Galenson Terms Offered: Autumn
Prerequisite(s): ECON 20100
Equivalent Course(s): ECON 22600

ECON 49700. The Required Research Seminar I. 100 Units.
The Required Research Seminar/Paper is designed to introduce the Ph.D. student to the demands and excitement of research, promote early contact with the faculty, and introduce the process of selecting a research topic and writing about it. (The thesis itself comes later and may be on a different topic.) Every student is required to write a research paper under faculty supervision by taking the Required Research Seminar.
Instructor(s): Staff Terms Offered: Autumn

ECON 49800. The Required Research Seminar II. 100 Units.
The Required Research Seminar/Paper is designed to introduce the Ph.D. student to the demands and excitement of research, promote early contact with the faculty, and introduce the process of selecting a research topic and writing about it. (The thesis itself comes later and may be on a different topic.) Every student is required to write a research paper under faculty supervision by taking the Required Research Seminar.
Terms Offered: Winter

ECON 49900. Required Research Seminar III. 100 Units.
The Required Research Seminar/Paper is designed to introduce the Ph.D. student to the demands and excitement of research, promote early contact with the faculty, and introduce the process of selecting a research topic and writing about it. (The thesis itself comes later and may be on a different topic.) Every student is required to write a research paper under faculty supervision by taking the Required Research Seminar.
Instructor(s): Faculty Terms Offered: Spring