Economics

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Program of Study

The program in economics is intended to equip students with the basic tools to understand the operation of a modern economy: the origin and role of prices and markets, the allocation of goods and services, and the factors that enter into the determination of income, employment, and the price level.

Students must begin their study with ECON 19800 and 19900 (Introduction to Microeconomics and Macroeconomics, respectively). These courses provide a good overview of basic concepts. These two introductory courses are designed for students with limited or no prior course work in economics. While these two courses provide basic economics knowledge, they do not count towards the economics major requirements.

Program Requirements

Core Curriculum. The BA degree in economics requires thirteen courses. These include the core curriculum, which consists of price theory (ECON 20000 and 20100) and macroeconomics (ECON 20200 and 20300). Three mathematics courses are required (see following section). STAT 23400 and ECON 21000 typically meet a requirement for two courses in econometrics. Students then choose a minimum of four additional economics courses to broaden their exposure to areas of applied economics or economic theory.

Mathematics Requirements. Students who have an interest in the major should take calculus at the highest level for which they qualify. Students enrolling in the MATH 13000s sequence must complete MATH 19520 before enrolling in ECON 20000.

Students enrolling in the MATH 15000s sequence must complete MATH 15300 before enrolling in ECON 20000. However, enrollment in ECON 20000 concurrently with MATH 15300 is allowed if a grade score of *A-* or higher is achieved in both MATH 15100 and 15200.

Students enrolling in the MATH 16000s sequence must complete MATH 16200 before enrolling in ECON 20000. Enrollment in ECON 20000 requires completion or concurrent enrollment in MATH 16300.

Statistics and Econometrics. Students may not use AP Statistics credit in high school to satisfy the statistics requirement. Students with AP credit will need to expand on their training with either STAT 23400 or 24400.

Linear algebra (MATH 19620), statistics (STAT 23400 or 24400), and econometrics (ECON 20900 or 21000) should be taken as a three-quarter sequence. Students should complete their math, statistics, and econometrics requirements by the end of their third year, as these courses are prerequisites or strongly recommended for a number of upper-level economics courses.

Electives. Of the BA degree's four elective requirements, three must be economics courses offered by the University. These courses must have a higher course number than ECON 20300.

One of the following Computer Science courses CMSC 10500, 12100, 15100, 15200; Statistics courses STAT 24500, 25100, 25300, 26100; Mathematics courses MATH 20500, 20900, and 27300 may count as an economics elective. Courses in other degree programs may be considered for elective credit through petition. To be considered, these courses must require the equivalent prerequisite coursework of ECON 20100.

A University of Chicago Booth School of Business course may be considered for elective credit if the course requires the equivalent of ECON 20100 as a prerequisite and is numbered as a Chicago Booth 40000 or higher course. Additionally, the course needs to pertain to the application of economic theory to a course subject that is not offered by the department of economics. Courses such as accounting, investments, and entrepreneurship will not be considered for economics elective credit. Consideration for elective credit must be done by petition before a student registers for the course. There will be no retroactive consideration for credit.

Summary of Requirements

General Education		MATH 13100-13200, 15100-15200, or 16100-16200*
Major	1	MATH 13300*, 15300*, or 16300*
	4	ECON 20000-20100-20200-20300
	1	STAT 23400 or 24400
	1	ECON 20900 or 21000
	2	MATH 19520-19620 (students are encouraged to take prior to or concurrently with ECON 20000-20100); or MATH 20300-20400; or MATH 20700-20800
	4	electives: These courses must include three economics courses numbered higher than ECON 20300 and must follow guidelines in preceding Electives section.
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* *Credit may be granted by examination.*

Grading. Beginning in autumn 2010, a major GPA of 2.0 or higher (with no grade lower than *C-*) is needed in required economics courses. Students majoring in economics must receive quality grades in all courses required in the degree program. Non-majors may take economics courses on a *P/F* basis; only grades of *C-* or higher constitute passing work.

Honors. To be considered for honors, students must meet the following requirements: (1) a GPA of 3.5 or higher in the major and a GPA of 3.2 or higher overall, (2) participation in the honors workshop and sole authorship of an independent research paper on a topic in economics, and (3) a faculty sponsor's letter evaluating this independent research paper. For award of honors, the project must receive a grade of *A* or *A-*. At the beginning of the student's fourth year, the economics honors committee must have a letter from an economics faculty sponsor expressing willingness to oversee the student's writing of an independent research paper and recommending the student be admitted into the honors workshop program. Honors papers should be outgrowths of economics electives or research assistant work for the faculty sponsor.

Participation in the Honors Workshop (ECON 29800) is mandatory throughout the year. Upon completion of the paper in the spring quarter, the student will then be retroactively registered for the course in a quarter of their choosing.

The research paper, a transcript, and a recommendation letter from the faculty sponsor evaluating the independent research paper must be submitted to the undergraduate economics program office for consideration by the economics honors committee no later than the end of fifth week of the quarter in which the student plans to graduate. Students wishing to qualify for honors should (1)

engage in preparatory course work in the area of interest no later than Spring Quarter of their third year and (2) consult with the program advisors no later than Winter Quarter of their third year.

This program may accept a BA paper or project used to satisfy the same requirement in another major if certain conditions are met and with the consent of the other program chair. Approval from both program chairs is required. Students should consult with the chairs by the earliest BA proposal deadline (or by the end of third year, when neither program publishes a deadline). A consent form, to be signed by both chairs, is available from the College adviser. It must be completed and returned to the College adviser by the end of Autumn Quarter of the student's year of graduation.

Preparation for PhD Programs in Economics. Students preparing to study economics at the graduate level should augment the standard curriculum with higher-level mathematics and statistics courses. MATH 19900 is a transition course for students who took MATH 13300 or 15300. Such students often choose to complete some or all of the Mathematics Major with Specialization in Economics, especially MATH 20300-20400 or 20700-20800. They can take MATH 19620 to acquire knowledge of linear algebra; MATH 16300 and 19900 also provide some coverage of linear algebra. Material on differential equations in MATH 20100 can also be useful. In addition, students who are interested in pursuing graduate study are encouraged to take appropriate courses from other departments in the social sciences and to seek research assistant jobs during their third and fourth years. It is important that such students consult early in the second year with one of the directors of the undergraduate program to design a plan of course work and research.

Faculty

F. Alvarez, G. Becker, P. Bondarenko, P. Braun, T. Chaney, R. Fogel, J. Fox, D. Galenson, S. Gay, L. Hansen, J. Heckman, B. Hickman, A. Hortaçsu, S. Kortum, S. Levitt, V. Lima, J. List, R. Lucas Jr., A. Menendez, C. Mulligan, K. Murphy, R. Myerson, D. Neal, P. Reny, A. Sanderson, S. Schennach, A. Shaikh, R. Shimer, H. Sonnenschein, N. Stokey, G. Tolley, G. Tsiang, H. Uhlig

Courses: Economics (ECON)

17800. Public Policy Analysis. (=PBPL 22200) *PQ: PBPL 20000 or ECON 20000. PBPL 22100-22200-22300 may be taken in or out of sequence.* This course reviews and augments the basic tools of microeconomics developed in ECON 20000 and applies these tools to policy problems. We examine situations in which private markets are likely to produce unsatisfactory results, suggesting a potential rationale for government intervention. Our goal is to allow students to comprehend, develop, and respond to economics arguments when formulating or evaluating public policy. But this course is not intended for students majoring in public policy who are planning to specialize in economics or to take advanced economics courses. *J. Leitzel. Winter.*

18600. U.S. Labor History. (=HIST 18600, LLSO 28000) This course explores the history of labor and laboring people in the United States. The significance of work is considered from the vantage points of political economy, culture, and law. Key topics include working-class life, industrialization and corporate capitalism, slavery and emancipation, the role of the state and trade unions, and race and sex difference in the workplace. *A. Stanley. Spring.*

19800. Introduction to Microeconomics. By way of economic theory, applications, and contemporary issues, this course treats (1) the behavior and decision making on the part of individuals, business firms, and governments; and (2) the function of costs, prices, incentives, and markets in the American economy. We discuss contemporary topics (e.g., distribution of income, the environment, education, sports, health care). *A. Sanderson. Autumn, Spring.*

19900. Introduction to Macroeconomics. By way of theory and public policy applications, this course covers current major domestic and international macroeconomic issues in the U.S. economy, including the determination of income and output, inflation, unemployment, and economic growth; money, banking, and the Federal Reserve System; federal spending, taxation, and deficits; and international trade, exchange rates, and the balance of payments. *A. Sanderson. Autumn, Winter.*

20000. The Elements of Economic Analysis I. *PQ: MATH 15300, 16300 or 19610. ECON 19800 is required of students without a prior microeconomics course.* This course develops the economic theory of consumer choice. This theory characterizes optimal choices for consumers given their incomes and preferences, as well as the relative prices of different goods. This course develops tools for analyzing how these optimal choices change when relative prices and consumer incomes change. Finally, this course presents several measures of consumer welfare. Students learn how to evaluate the impact of taxes and subsidies using these measures. *Autumn, Spring.*

20100. The Elements of Economic Analysis II. *PQ: ECON 20000. This course is a continuation of ECON 20000.* The first part of this course discusses markets with one or a few suppliers. The second part focuses on demand and supply for factors of production and the distribution of income in the economy. This course also includes some elementary general equilibrium theory and welfare economics. *Autumn, Winter.*

20200. The Elements of Economic Analysis III. *PQ: ECON 20100. ECON 19900 is required of students without a prior macroeconomics course.* As an introduction to macroeconomic theory and policy, this course covers the determination of aggregate demand (i.e., consumption, investment, the demand for money); aggregate supply; and the interaction between aggregate demand and supply. We also discuss activist and monetarist views of fiscal and monetary policy. *Winter, Spring.*

20300. The Elements of Economic Analysis IV. *PQ: ECON 20200 or equivalent.* This is a course in money and banking, monetary theories, the determinants of the supply and demand for money, the operation of the banking system, monetary policies, financial markets, and portfolio choice. *Autumn, Spring.*

20400. Directed Readings in the History of Economic Thought. *PQ: ECON 20300 or consent of instructor.* To better understand economic thought as work in progress, students in this course explore the evolution of economics. We read observations of economic activity by early writers (e.g., Xenophon and Aristotle); and observations on money by Oresme and Bodin; more systematic treatments on exchange and commerce by Smith, Ricardo, Marx, and Marshall; and twentieth-century debates. Students acquaint themselves with the cultural contexts of these writers, as well as the modern-day theories regarding the economic questions raised. Our goal is to have a better understanding of the roots of prevailing economic ideas. *G. Tsiang. Winter.*

20600. Economics of Information. *PQ: ECON 20100.* This course begins with a short section on uncertainty (i.e., risk aversion, contingent claims, gambling, risk sharing). We then study various adverse selection and moral hazard problems. Specific applications include job market signaling, re-sale markets, insurance markets, search models, and sovereign debt. This course is intended for students who enjoy analyzing theoretical (mathematical) models and may be of special interest to students who are planning to study economics at the graduate level. *Winter.*

20700. Game Theory and Economic Applications. *PQ: ECON 20100. Either ECON 20700 or 20710 may be used as an economics elective, but not both.* This course introduces the basic ideas and applications of game theory. Topics include models of games in extensive and strategic form, equilibria with randomization, signaling and beliefs, reputation in repeated games, bargaining games, investment hold-up problems, and mediation and incentive constraints. *Spring.*

20710. Game Theory: A Formal Approach. *PQ: ECON 20100 and MATH 20300, or consent of instructor. Either ECON 20700 or 20710 may be used as an economics elective, but not both.* This course is a rigorous introduction to game theory with an emphasis on formal methods. Definitions of a game, preferences, chance moves, and Nash Equilibrium and its extensions are provided. Applications are given to classical games (such as chess), bargaining, and economic models. This course is intended for students who are planning to study economics at the graduate level and for students with an interest in a mathematical approach to basic issues in the social sciences. *H. Sonnenschein. Autumn.*

20800. Theory of Auctions. *PQ: ECON 20100.* In part, this course covers the analysis of the standard auction formats (i.e., Dutch, English, sealed-bid) and describes conditions under which they are revenue maximizing. We introduce both independent private-value models and interdependent-value models with affiliated signals. Multi-unit auctions are also analyzed with an emphasis on Vickrey's auction and its extension to the interdependent-value setting. *Spring.*

20900. Introduction to Econometrics: Honors. *PQ: ECON 20300, and STAT 24400 or 24500; or consent of instructor.* The topics are essentially the same as those covered in ECON 21000, but this foundations course in econometrics gives a more systematic introduction to the application of statistical theory to economic applications. This course is intended for students who are planning to study economics at the graduate level. *Winter, Spring.*

21000. Econometrics A. *PQ: ECON 20200, STAT 23400, and MATH 19620 or 20000. Required of students who are majoring in economics; those students are encouraged to meet this requirement by the end of their third year.* This course covers the single and multiple linear regression model, the associated distribution theory, and testing procedures; corrections for heteroskedasticity, autocorrelation, and simultaneous equations; and other extensions as time permits. Students also apply the techniques to a variety of data sets using PCs. *Autumn, Winter, Spring.*

21100. Econometrics B. *PQ: ECON 20900 or 21000.* This course provides students with a basic understanding of how econometrics, economic theory, and knowledge of institutions can be used to draw credible inferences on economic relationships. Topics include multivariate linear regression, causal inference, omitted variables bias, fixed and random effects models, simultaneous equation models, the propensity score, and discrete choice models. Students have the opportunity to apply these techniques to empirical questions in industrial organization, as well as in environmental, labor, and public economics. *Spring.*

21200. Time Series Econometrics. *PQ: ECON 20900 or 21000.* This course examines time series models and the testing of such models against observed evolution of economic quantities. Topics include autocorrelation and heteroskedasticity in time series applications of the general linear model. Students see the applications of these time series models in macroeconomics and finance. *P. Bondarenko. Autumn.*

21800. Experimental Economics. *PQ: ECON 20100.* 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. *J. List. Spring.*

22200/32000. Topics in American Economic History. *PQ: ECON 20100.* Economic analysis is applied to important issues in American economic history. Typical topics include the economics of colonization, transatlantic slave trade, role of indentured servitude and slavery in the colonial labor market, sources of nineteenth-century economic growth, economic causes and effects of nineteenth-century immigration, expansion of education, and economics of westward migration. *D. Galenson. Autumn, Winter.*

22300/32300. Business Ethics in Historical Perspective. (=BUSE 56400) *College students must use the undergraduate number to register.* This course examines the way that religious and political movements affect the ethics of business. We

focus on contemporary issues and relate them to long cycles in religiosity in the United States, long-term factors influencing political images of business, and factors influencing domestic conceptions of the proper economic relationships between the United States and the rest of the world. *R. Fogel. Winter.*

22500/32200. Population and the Economy. *PQ: ECON 20100 or consent of instructor. College students must use the undergraduate number to register.* This course deals with the effects of swings in population on the stability of the economy and opportunities for business. Topics include the effects of demographic changes on markets for labor and capital, on savings rates and the structure of investment, on taxes and government expenditures, and on household behavior. Problems of planning for the consequences of population changes, including methods of forecasting, are also considered. *R. Fogel. Autumn.*

22600. Innovators. *PQ: ECON 20100.* 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. *D. Galenson. Autumn.*

22650. Creativity. *PQ: ECON 19800 or permission.* 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. *D. Galenson. Winter.*

22700/32400. Economics and Demography of Marketing. *PQ: ECON 20000 and 20100, or equivalent.* This course examines the factors that influence long-term, intermediate-term, and short-term variations in the demand for both consumer and producer commodities and services: the evolution of markets and methods of distribution in America since 1800, variations in the life cycles of products, the role of demographic factors in analysis of product demand, and the influence of business cycles on product demand. Much attention is given to the use of existing online databases for the estimation of a variety of forecasting models. *R. Fogel. Spring.*

23000. Money and Banking. *PQ: Econ 20300.* This course covers economic theories and topical issues in money and banking. We discuss such "traditional" topics as the quantity theory, the Phillips curve, and the money creation process. We also investigate models of bank runs and financial crises, the tradeoff between rules and discretion, and the New Macroeconomic Synthesis of New Classical. Other topics include New Keynesian approaches to modeling money and monetary policy, practical and institutional issues in European and U.S. monetary policy, and the 2008 financial crisis. *H. Uhlig. Autumn.*

23200. Topics in Macroeconomics. *PQ: ECON 20300 and MATH 20300.* This course focuses on the use of dynamic general equilibrium models to study questions in macroeconomics. Topics include long-run growth and dynamic fiscal policy (Ricardian equivalence, tax smoothing, capital taxation), labor market search, industry investment, and asset pricing. On the technical side, we cover basic optimal control (Hamiltonians) and dynamic programming (Bellman equations). *N. Stokey. Winter.*

24000. Introduction to Labor Economics. *PQ: ECON 20100 and 21000.* Topics include the theory of time allocation, the payoffs to education as an investment, detecting wage discrimination, unions, and wage patterns. Most of the examples are taken from U.S. labor data, although we discuss immigration patterns and their effects on U.S. labor markets. Some attention is also given to the changing characteristics of the workplace. *Not offered 2010–11; will be offered 2011–12.*

24101. Public Policy and Wage Inequality. (=PBPL 24101) *PQ: ECON 20100. Spring.*

24400. Pay and Performance. *PQ: ECON 20100.* This course examines the relationships between education, types of pay, and careers. After a basic introduction to the roles of education, training, and ability in human capital formation, we develop a theory of how workers and firms determine types of pay (e.g., salary, piece rates, bonuses, options) and career paths within and between firms. Other topics include incentives and insurance in pay determination, hiring, turnover, benefit levels and their relationship to wages, and compensation levels over the career. *K. Ierulli. Winter.*

24500. Topics in Microeconomics: Family. *PQ: ECON 20300 and 21000.* This course introduces models in topics that include household production, marriage, fertility, religion, social markets, addiction, self-control, information cascades, and discrimination. Readings comprise empirical papers that test these models. *This course is offered only in even numbered years. V. Lima. Winter.*

25000. Introduction to Finance. *PQ: ECON 20300 and STAT 23400; and prior or concurrent registration in ECON 21000.* This course develops the tools to quantify the risk and return of financial instruments. These are applied to standard financial problems faced by firms and investors. Topics include arbitrage pricing, the capital asset pricing model, and the theory of efficient markets and option pricing. *P. Braun. Autumn, Winter.*

25100. Financial Economics B; Speculative Markets. *PQ: ECON 20100 and STAT 23400.* This course focuses on the description, pricing, and hedging of basic derivative claims on financial assets. We study the characteristics, uses, and payoffs of a variety of contracts where the underlying claims include commodities, foreign currencies, bonds, stocks, or stock indices. We examine contracts such as options, swaps, and futures contracts. We use a unified approach (the technique of portfolio replication) to study pricing of these claims. Students also gain an understanding of strategies for hedging of the risks inherent in holding these derivative claims. *F. Alvarez. Spring.*

25200. Theory of Financial Decisions. *PQ: ECON 25000 required; ECON 25000 recommended.* This course studies theories and empirical evidence on financial decision making. They include the Miller and Modigliani propositions on optimal dividend and debt policy; alternative signaling models to understand firm behavior around capital raising and dividend decisions; and agency theories to understand capital budgeting decisions of the firm under uncertainty. We also review the empirical evidence on how firms make decisions. For example, we examine the Litner model of dividend behavior, as well as alternative debt-equity ratios around the world relative to local tax structures and the gains to acquisitions. *P. Braun. Spring.*

25500. Topics in Economic Growth and Development. *PQ: ECON 20200 and 21000.* This course examines current issues in the economics of developing countries. The focus is on macroeconomic models of economic growth and technological change. We also cover some microeconomic studies of land, labor, and credit markets in less-developed countries. *K. Basu. Autumn.*

25620. Topics in Latin American Economies. *PQ: ECON 20300.* This course examines current issues in the economies of Latin America. Topics include sources of economic growth, commercial policy, regional economic integration, inflation and stabilization, fiscal deficits, the choice of an exchange rate regime, and debt problems. *A. Menendez. Spring.*

26010. Introduction to Public Finance. *PQ: ECON 20300 or consent of instructor.* This course examines the role of the government in the U.S. economy. We consider the efficiency and equity arguments for government intervention and analyze empirical evidence on the effects of tax and expenditure policy on economic outcomes. Topics include government-provided goods (with a focus on education), social insurance programs, government provision of health insurance, welfare programs, and tax policy. The effects of potential future policy changes (e.g., vouchers in K–12 education, individual accounts for Social Security) are also discussed. *Spring.*

26300. Economics of Education. *PQ: ECON 21000.* This course explores economic models of the demand for and supply of different forms of schooling. The course examines the markets for primary, secondary, and post-secondary schooling. The course examines numerous public policy questions, such as the role of government in funding or subsidizing education, the design of public accountability systems, the design of systems that deliver publicly funded (and possibly provided) education, and the relationship between education markets and housing markets. *D. Neal. Spring.*

26500. Environmental Economics. (=ENST 26500, PPHA 32800) *PQ: ECON 20100.* This course applies theoretical and empirical economic tools to environmental issues. We discuss broad concepts such as externalities, public goods, property rights, market failure, and social cost-benefit analysis. These concepts are applied to areas that include nonrenewable resources, air and water pollution, solid waste management, and hazardous substances. We emphasize analyzing the optimal role for public policy. *G. Tolley, S. Shaikh. Winter.*

26510. Advanced Topics in Environmental Economics. (=ENST 26510) *PQ: ECON 20900, ECON 21000, ECON 26500, or ENST 26500.* This course applies theoretical and empirical economic tools to a number of environmental issues. We discuss broad concepts that include externalities, public goods, property rights, market failure, and benefit-cost analysis. These concepts are applied to a number of areas that include nonrenewable resources, air and water pollution, solid waste management, and hazardous substances. We emphasize analyzing the optimal role for public policy. *J. List. Spring.*

26600/36500. Economics of Urban Policies. (=GEOG 26600/36600, LLSO 26202, PBPL 24500) *PQ: ECON 20100.* This course covers tools needed to analyze urban economics and address urban policy problems. Topics include a basic model of residential location and rents; income, amenities, and neighborhoods; homelessness and urban poverty; decisions on housing purchase versus rental (e.g., housing taxation, housing finance, landlord monitoring); models of commuting mode choice and congestion and transportation pricing and policy; urban growth; and Third World cities. *G. Tolley, J. Felkner. Spring.*

26800. Energy and Energy Policy. (=BPRO 29000, CHSS 37502, ENST 29000, PBPL 29000, PPHA 39201, PSMS 39000) *PQ: Third- or fourth-year standing. PQ for ECON 26800: ECON 26500 and consent of instructor.* This course shows how scientific constraints affect economic and other policy decisions regarding energy, what energy-based issues confront our society and how we may address them through both policy and scientific study, and how the policy and scientific aspects can and should interact. We address specific technologies and the policy questions associated with each, as well as with more overarching aspects of energy policy that may affect several, perhaps many, technologies. *S. Berry, G. Tolley. Autumn.*

27000. Introduction to International Economics. (=PBPL 27000) *PQ: ECON 20300 or consent of instructor.* This course deals with the pure theory of international trade: the real side of international economics. Topics include the basis for and gains from trade; the theory of comparative advantage; and effects of international trade on the distribution of income, tariffs, and other barriers to trade. *S. Kortum. Autumn.*

27300. Regulation of Vice. (=PBPL 27300) *PQ: ECON 20000 or PBPL 20000.* This course discusses government policy regarding traditional vices (i.e., drinking, smoking, gambling, illicit sex, recreational drug use). Among policies considered are prohibition, taxation, treatment, decriminalization, and legalization. The intellectual framework employed to evaluate various policies is primarily economic, though other disciplines are drawn upon. *This course is offered in alternate years. J. Leitzel. Spring.*

27700. Health Economics and Public Policy. (=BUSF 85700, PBPL 28300, PPHA 38300, SSAD 47700) *PQ: ECON 20300 and 21000, and consent of instructor. D. Meltzer. Spring.*

27750. The Economics of Health. *PQ: ECON 21000.* This course uses theoretical and empirical economic tools to analyze a wide range of issues related to health, health care, and health behaviors. Topics include the socioeconomic determinants of health disparities, the developmental origins of health, health insurance, and government intervention in health care markets, and the effects of the recent health care reform. This course may be of special interest to students who are planning to pursue research in this field. *G. Conti. Winter.*

28000. Introduction to Industrial Organization. *PQ: ECON 20100.* This course extends the analysis from ECON 20100, with a focus on understanding the way firms make decisions and the effects of those decisions on market outcomes and welfare. The course examines the structure and behavior of firms within industries. Topics include oligopolistic behavior, the problems of regulating highly concentrated industries, and the implementation of U.S. antitrust policy. *A. Hortacsu. Winter, Spring.*

28100. The Economics of Sports. *PQ: ECON 20100.* This is a course in microeconomics that applies traditional product and factor market theory and quantitative analysis to contemporary economic issues in professional and college athletics. Topics include the sports business; market structures and outcomes; the market for franchises; barriers to entry, rival leagues, and expansion; cooperative, competitive, and collusive behavior among participants; labor markets, productivity, and compensation of players; racial discrimination; public policies and antitrust legislation; and financing of stadiums. *A. Sanderson. Spring.*

28600. Introduction to the Economic Analysis of Law. (=PBPL 28605) *PQ: ECON 20100.* This course examines the structure of law from an economic basis. Topics include property rights, contracts, torts, the Coase theorem, and criminal law. *J. Leitzel. Autumn.*

28700. The Economics of Crime. (=PBPL 23200) *PQ: ECON 20100 required; ECON 21000 or STAT 23400 strongly recommended.* This course uses theoretical and empirical economic tools to analyze a wide range of issues related to criminal behavior. Topics include the police, prisons, gang behavior, guns, drugs, capital punishment, labor markets and the macroeconomy, and income inequality. We emphasize the analysis of the optimal role for public policy. *This course is offered only in even numbered year. S. Levitt. Winter.*

29700. Undergraduate Reading and Research. *PQ: Consent of directors of the undergraduate program. Students are required to submit the College Reading and Research Course Form. Autumn, Winter, Spring.*

29800. Undergraduate Honors Workshop. *PQ: Faculty sponsorship and consent of honors workshop supervisors.* For details, see the preceding Honors section. *G. Tsiang, V. Lima. Autumn, Winter, Spring.*