Economics

Acting Co-Director of the Undergraduate Program: Derek Neal, SS 401E, 702-8166

Co-Director of the Undergraduate Program: Grace Tsiang, SS 420, 702-3410

Student Support Assistant: Robert Herbst, SS 419, 834-1972

E-mail: undergrad-economics@uchicago.edu Web: economics.uchicago.edu/undergrad.html

(To subscribe to the Econmajor mailing list, use Mailing List link.)

Program of Study

The B.A. 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.

Program Requirements

Core Curriculum. The B.A. concentration in economics requires thirteen courses. These must include the core curriculum, which consists of price theory (ECON 20000, 20100) and macroeconomics (ECON 20200 and 20300). One course in economic history (ECON 22000, 22100, 22200, 22300, 22500, 22900, 25400, 25700, 25800, or 27900) and two courses in econometrics are also required; STAT 22000 and ECON 21000 normally meet the latter requirement. Students should choose the remaining three electives to broaden their exposure to areas of applied economics or advanced theory. Students are encouraged to begin their study with ECON 19800 or 19900, or both. Starting in 2003, ECON 19800 will be offered both Autumn and Spring Quarters. Some students decide after taking ECON 19800-19900 (Introduction to Micro- and Macroeconomics) that they would like to concentrate in economics. The directors of the undergraduate program will consider petitions to waive the requirement of ECON 20300 for students who have taken ECON 19800-19900 before any of the ECON 20000-20100-20200 courses. Petitions by students taking ECON 19800-19900 after any of the other ECON 20000-20200 courses will not be considered.

Mathematics Requirements. Students concentrating in economics must also take three mathematics courses beyond the general education requirement. These consist of the third quarter of calculus (MATH 13300, 15300, or 16300) followed by a two-quarter sequence (MATH 19510-19610, 20000-20100, or 20300-20400) to be taken concurrently with ECON 20000-20300. Economics concentrators should take calculus at the highest level for which they qualify. Students with *B*'s or higher in MATH 16100 and 16200 may take ECON 20000 concurrently with MATH 16300. Students with *A*- or higher in MATH 15100 and 15200 may take ECON 20000 concurrently with MATH 15300. (NOTE: As of Autumn 2002, MATH 19510 covers material previously taught in MATH 19600, and MATH 19610 covers material previously taught in MATH 19500. With this renumbering, the department has changed the order in which these courses are taken.)

Statistics and Econometrics. ECON 21000 is designed to follow STAT 22000 or 23500. Students who have a score of 4 or 5 on the Advanced Placement statistics test may receive credit for STAT 22000. Because econometrics builds directly on a knowledge of statistics, most students with AP credit find it hard to do well in econometrics without extensive review of statistics. Students who took AP statistics in high school are encouraged to continue with either STAT 24400-24500 or 25100. Students planning to take ECON 20900 (honors section of Econometrics A) are strongly encouraged to take MATH 20300 followed by STAT 24400-24500 or STAT 25100.

Students should plan to complete ECON 21000 by the end of their third year. ECON 21000 is a prerequisite for ECON 21100, 21200, 24000, 26500, 27700, and 29800; it is strongly recommended that students take ECON 21000 before they take ECON 23100, 25000, 25500, and 25700.

Electives. To broaden knowledge of economics applications, concentrators must register for at least three economics elective courses, two of which must be an economics course numbered higher than ECON 20300. A course used to satisfy the economic history requirement may not also be counted as one of these three economics electives. The third elective may be (1) another economics course numbered higher than 20300; or (2) MATH 20300, 20400, 20500, 20700, 20800, 20900, or 27300 (see "Preparation for Ph.D. Programs in Economics" below); or CMSC 10500 or 11500; or STAT 25100. It is recommended that students use courses from the second group to augment (rather than to substitute for) economics electives.

NOTE: Students wishing to substitute other courses for those listed in the previous paragraphs must obtain written permission from one of the directors of the undergraduate economics program before registering for the course. Departmental approval is a prerequisite for registration in graduate (30000-level) courses.

Summary of Requirements

General Education MATH 13100-13200, 15100-15200, or 16100-16200†

Concentration

- 1 MATH 13300, 15300, or 16300†
- 4 ECON 20000-20100-20200-20300
- 1 economic history (ECON 22100, 22200, 22300, 22500, 22900, 25700, 25800, or 27900)*
- 1 STAT 22000†, STAT 23500, or STAT 24400
- 1 ECON 20900 or 21000
- 2 MATH 19510-19610, 20000-20100, 22000-22100 (recommended to be taken concurrently with ECON 20000-20100); or MATH 20300-20400
- 3 electives: These courses must include two economics courses numbered higher than ECON 20300 and must follow guidelines in "Electives" above

13

Credit may be granted by examination.

See the department's Web site for current economic history courses.

Grading. Of the thirteen courses required for the concentration in economics, twelve must be taken for quality grades and one may be taken P/F. For economics concentrators, only quality grades are acceptable for ECON 20000, 20100, 20200, 20300, 20900, and 21000, and for STAT 22000, 23500, and 24400. Nonconcentrators may take these courses P/Fwith consent of the instructor. (Students graduating before Autumn Quarter 2003 are permitted to take two courses P/\bar{F} .)

Honors. To be considered for honors in economics, students must meet the following requirements: (1) a GPA of 3.5 or higher in the concentration 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. 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. Honors workshop participation (ECON 29800) is mandatory throughout the year. Students may register for one quarter of ECON 29800 in either Autumn, Winter, or Spring Quarter; ECON 29800 will count as one economics elective. 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 the third year and (2) consult with the program advisors no later than Winter Quarter of their third year.

Preparation for Ph.D. Programs in Economics. Students interested in pursuing graduate study should augment the standard curriculum with higher-level mathematics and statistics courses. These include MATH 20300-20500 and 25000, and STAT 25100 and 24400-24500. Such students often choose to complete the Math Concentration with Specialization in Economics. Students should also consider taking appropriate courses from other departments in the social sciences and seek research assistant jobs during their third and fourth years. It is important to 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.-A. Chiappori, M. Duggan, R. Fogel, D. Galenson, M. Ghatak,

M. Greenstone, L. Hansen, J. Heckman, D. Heller, A. Hortaçsu, D. G. Johnson,

- B. Jovanovic, S. Levitt, V. Lima, R. Lucas, Jr., H. Lustig, H. Margolis, D. Meltzer,
- R. Myerson, C. Mulligan, D. Neal, P. Reny, A. Sanderson, S. Schennach, L. Sjaastad,
- H. Sonnenschein, B. Szentes, N. Stokey, C. Syverson, L. Telser, G. Tolley, R. Townsend,
- G. Tsiang, A. Vissing-Jorgensen, M. Yorukoglu

Courses

19800. Introduction to Microeconomics. Economics concentrators may use ECON 19800-19900 to meet economics core curriculum requirements only under circumstances described in "Program Requirements" above. By way of economic theory, applications, and contemporary issues, the 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 such as the distribution of income, the environment, education, sports, and health care. A. Sanderson. Autumn, Spring.

19900. Introduction to Macroeconomics. Economics concentrators may use ECON 19800-19900 to meet economics core curriculum requirements only under circumstances described in "Program Requirements" above. 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. Winter.

20000. The Elements of Economic Analysis I. PO: One year of calculus. Concentrators should see guidelines in "Mathematics Requirements" above. This course develops the economic theory of consumer choice. This theory characterizes optimal choices for consumers given their incomes, their preferences, and the relative prices of different goods. The course develops tools for analyzing how these optimal choices change when relative prices and consumer incomes change. Finally, the course presents several measures of consumer welfare. Students learn how to evaluate the impact of taxes and subsidies using these measures. If time permits, the course examines the determination of market prices and quantities, given primitive assumptions concerning the supply of goods. A. Hortaçsu, M. Duggan, Staff, Autumn; G. Tsiang, Staff, Spring.

20100. The Elements of Economic Analysis II. PQ: ECON 20000. This course is a continuation of ECON 20000. The first part 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. The course also includes some elementary general equilibrium theory and welfare economics. Autumn, Winter.

20200. The Elements of Economic Analysis III. PQ: ECON 20000 required; ECON 20100 recommended. As an introduction to macroeconomic theory and policy, this course covers the determination of aggregate demand (i.e., consumption, investment, and the demand for money), aggregate supply, and the interaction between aggregate demand and supply. The course also discusses activist and monetarist views of fiscal and monetary policy. M. Yorukoglu, Staff, Winter; C. Syverson, Staff, 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. Staff, Autumn; C. Mulligan, Staff, Spring.

- **20500. Decision Analysis and Probability Models.** PQ: ECON 20100. This course is a basic introduction to mathematical models of optimal decisionmaking under uncertainty. Students learn to use Monte Carlo simulation and other techniques for sophisticated computational analysis in spreadsheets. Topics include fundamentals of probability modeling (discrete and continuous random variables, correlation, and conditional expectation), utility theory with constant risk tolerance, optimization of decision variables, competitive bidding, analysis of investment portfolios, risk sharing and moral-hazard incentive problems, asset pricing in financial markets, and dynamic models of growth and arrivals. R. Myerson. Autumn.
- **20700.** Game Theory and Economic Applications. PO: ECON 20100. Either ECON 20700 or 20710 may be used as an economics elective, but not both. This course introduces students to 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. R. Myerson. 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 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, and applications are given to classical games (such as chess), bargaining, and economic models. It is most suitable for students who are considering graduate school in economics and for those interested 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 (Dutch, English, and sealed-bid), and also describes conditions under which they are revenue maximizing. Both independent private-value models and interdependent-value models with affiliated signals are introduced. Multi-unit auctions are also analyzed with an emphasis on Vickrey's auction and its extension to the interdependent-value setting. P. Reny. Winter.
- **20900.** Introduction to Econometrics: Honors. PQ: ECON 20200 and STAT 24400 or 24500 required; MATH 19500, 20000, or 25000 recommended. This is a foundations course in econometrics for students who are planning to continue their economics study at the graduate level. The topics are essentially the same as those covered in ECON 21000, but this course gives a more systematic introduction to the application of statistical theory to economic applications. V. Lima. Winter.
- **21000.** Econometrics A. PQ: ECON 20100 and 20200, STAT 22000, and MATH 19500 or 20000 or 25000. Students with AP credit for STAT 22000 should see "Statistics and Econometrics" under "Program Requirements" above. Required of concentrators; students are encouraged to meet this requirement by the end of the third year. Econometrics A 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. S. Schennach, Autumn; Staff, 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. Specific 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. M. Greenstone. 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 heteroscedasticity in time series applications of the general linear model. Students will see the applications of these time series models in macroeconomics and finance. Spring.
- 22100/32100. Colonization, Servitude, and Slavery: The Early American **Experience.** PQ: ECON 20000. This course considers economic analysis of the early American labor market, drawing on new research on the economic and social history of the colonies. Topics include the English background and economic stimulus to colonization, economics of the Jamestown experiment, mortality in the early colonies, the economics of white indentured servitude, opportunities for immigrants, the economics of the transatlantic slave trade, the growth of black slavery, and the wealth of the colonies. D. Galenson. Winter.
- **22200/32000.** Topics in American Economic History. *PQ: ECON 20000.* Economic analysis is applied to important issues in American economic history. Typical topics include the economics of colonization, the transatlantic slave trade, the role of indentured servitude and slavery in the colonial labor market, the sources of nineteenth-century economic growth, economic causes and effects of nineteenth-century immigration, the expansion of education, and the economics of westward migration. D. Galenson. Autumn, Winter.
- 22300/32300. Business Ethics in Historical Perspective. (=GSBD 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, to the long-term factors influencing political images of business, and to the 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. In both the short run

and the medium run, shifts in the demographic rates probably have been more destabilizing than unwise macroeconomic policy or abrupt political realignments. Population change is thus a major challenge to policy makers in business and in government. 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*.

22700/32400. Economics and Demography of Marketing. *PQ: ECON 20000 and 20100, or equivalent. This course does not meet the economics history requirement.* 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.*

22900. Topics in Monetary History. *PQ: ECON 20300.* This course covers selected topics in European and U.S. monetary history from the Middle Ages to the twentieth century. It traces the evolution of money from a simple commodity chosen to measure value, into the intrinsically worthless fiat money of today. This evolution stretched over centuries, and involved learning the best way to manage a currency. Monetary policy being linked to fiscal policy and constraints, this course examines money in the broad context of government revenues, spending, and borrowing over time and in different political regimes. *F. Velde. Winter*.

22950. Monetary Policy and Financial Institutions: Argentina 1860 to 2002. *PQ: ECON 20000*. This course explores case studies in the macroeconomic history of Argentina from 1860 to the present acute crisis using both quantitative economic and institutional approaches. Topics include political economy dynamics; the government budget constraint; the search for a monetary authority and the global context; currency substitution, monetary credibility, and the capital market; public debt management; deflation, expectations, and investment; metallic regimes and fiat money; and the Baring crash and the contemporaneous 2001-02 economic crash. *G. D. Paolera. Winter*, 2003.

23100. Topics in Macroeconomics and Finance. PQ: ECON 20100 and 20300 required; ECON 21000 and 21100 recommended. The goal of the course is for students to use and analyze data to verify or refute an economic hypothesis. Lecture topics include the formulation of an economic hypothesis; the translation of an economic hypothesis; the gathering of data from the Internet and other sources; and the analysis of counter-arguments using regression, instrumental variable, and dummy variable techniques. Examples are drawn mainly from macroeconomics. Writing the term paper can be an excellent start on a senior honors paper. C. Mulligan. Spring.

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. Autumn.
- **24101.** Public Policy and Wage Inequality. (=PBPL 24101) PQ: ECON 20100. Over roughly the last two decades, the United States has seen a dramatic increase in wage inequality. This course explores potential explanations for this phenomenon and specifically examines the role that public policy may have played. The course deals extensively with analyses of minimum wage laws, trade agreements, affirmative action enforcement, and government education and training programs. The course not only focuses on changes in policy over time within the United States but also explores comparisons between U.S. policy and corresponding policies in other developed countries. D. Neal. Spring.
- **25000.** Introduction to Finance. PQ: ECON 20100 and 20300, STAT 22000, and completion of 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. *Staff, Autumn;* Staff, Winter; F. Alvarez, Spring.
- 25100. Topics in Finance and Uncertainty. PQ: Basic knowledge of probability theory; and ECON 20100 and STAT 22000. This course describes the foundations of decision theory under uncertainty: the notion of expected utility, the definition and measure of risk aversion, and the formalization of demand for insurance. It analyzes the role of markets in the efficient allocation of risk within an economy with a special emphasis on financial assets. Finally, a brief introduction to the literature on asymmetric information is provided. P. Chiappori. Autumn. Not offered 2002-03.
- 25500. Topics in Economic Growth and Development. PQ: ECON 20200 and 21000. This class 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. Autumn.
- 25600. Problems of Economic Policy in Developing Countries. (=PBPL 28600, PPHA 37500) PQ: ECON 20100 and 20200, or consent of instructor. This course focuses on the application of economic analysis to economic policy issues frequently encountered in developing countries. Topics include sources of economic growth, commercial policy, regional economic integration, inflation and stabilization, fiscal deficits, the choice of an exchange rate regime, and the international debt problem. L. Sjaastad. Spring.
- **25700.** Topics in Chinese Economy. PQ: ECON 20100 and 20200 required; ECON 21000 recommended. In this course, students learn to apply standard economic theory to study the Chinese economy. It includes a review of economic policies from 1949 to 1978, and a study of the Chinese economic reforms since 1978 and their contribution to economic growth, with emphasis on the difficulties preventing further reforms. *Spring*.

- **25800. Korean Economy.** *PQ: ECON 20100 and 20300.* This course examines the Korean economy in comparison to the other Asian economies. Topics include historical growth, the role of planning in creating the postwar structure of industry and financial markets, and the financial crisis and its aftermath. *Spring.*
- **26010. Introduction to Public Finance.** *PQ: ECON 20200 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 effect of potential future policy changes (e.g., vouchers in K-12 education, individual accounts for Social Security) are also discussed. *M. Duggan. Autumn.*
- **26500.** Environmental Economics. (=ENST 26500, PPHA 32800) *PQ: ECON 20100*. This course applies theoretical and empirical economic tools to a number of environmental issues. The broad concepts discussed include externalities, public goods, property rights, market failure, and social costbenefit analysis. These concepts are applied to a number of areas including nonrenewable resources, air pollution, water pollution, solid waste management, and hazardous substances. Special emphasis is devoted to analyzing the optimal role for public policy. *G. Tolley. Winter*.
- **26600/36500.** Economics of Urban Policies. (=GEOG 26600/36600, 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 such as housing taxation, housing finance, and landlord monitoring; models of commuting mode choice and congestion and transportation pricing and policy; urban growth; and Third World cities. *Not offered 2002-03*.
- **26900.** Public Choice. (=PBPL 25800) *PQ: ECON 20100 or PBPL 22200, or consent of instructor*. For course description, see Public Policy Studies. *H. Margolis. Winter*.
- **27000.** Introduction to International Economics. (=PBPL 27000) *PQ*: *ECON 20100 and 20200, 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. *L. Sjaastad. Autumn*.
- **27100.** Introduction to International Finance. *PQ: ECON 27000.* This course examines international monetary problems and policies, and introduces the techniques with which economists analyze macroeconomic interactions between countries. Topics include open economy macroeconomics, exchange rates, and assessment of monetary policy regimes over recent history. We also discuss the problems of international policy coordination, capital market integration, international debt, and reform in Latin

- **27200. Topics in International Economics.** *PQ: ECON 20300.* This course deals with the relation between international trade and economic growth. We survey mathematical models of growth in which the diffusion of technology and the wealth of nations are affected by the quantity and quality of trade. *R. Lucas. Winter.*
- **27300. Regulation of Vice.** (=PBPL 27300) *PQ: ECON 20000*. For course description, see Public Policy Studies. *J. Leitzel. Spring*.
- **27700.** Health Economics and Public Policy. (=GSBC 85700, PBPL 28300/38300, SSAD 47700) *PQ: ECON 20300 and 21000, and consent of instructor*. This course analyzes the economics of health care in the United States with particular attention paid to the role of government. *D. Meltzer. Spring*.
- **27800.** Public Policy Analysis. (=PBPL 22200) *PQ: ECON 20000. PBPL 22100-22200-22300 may be taken in sequence or individually.* For course description, see Public Policy Studies. *J. Leitzel. Winter.*
- **27900.** Economies in Transition: China, Russia, and Beyond. (=PBPL 27100) *PQ: ECON 20000 or consent of instructor*. For course description, see Public Policy Studies. *J. Leitzel. Winter*.
- **28000. Introduction to Industrial Organization.** *PQ: ECON 20100.* This course extends the analysis from ECON 20100, focusing 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. *Autumn*.
- **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, including: 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, and player productivity and compensation; racial discrimination; public policies and antitrust legislation; and financing of stadiums. *A. Sanderson. Spring.*
- **28600.** Introduction to Economic Analysis of Law. *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. *Spring*.
- **28700.** The Economics of Crime. (=PBPL 23200) *PQ: ECON 20100 required; ECON 21000 or STAT 22000 strongly recommended.* This course uses theoretical and empirical economic tools to analyze a wide range of issues related to criminal behavior. Among the topics discussed are the police, prisons, gang behavior, guns, drugs, capital punishment, labor markets and the macroeconomy, and income inequality. Special emphasis is

devoted to analyzing the optimal role for public policy. S. Levitt. Spring. Offered 2003-04; not offered 2002-03.

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. See "Honors" above. V. Lima, G. Tsiang. Autumn, Winter, Spring.