Economics is the study of how individuals and societies allocate limited resources to try to satisfy unlimited wants; it is therefore a study of choices. Households and business firms must decide what and how much to consume or produce and how much labor, land and capital to supply. Governments make decisions affecting inflation and unemployment, taxation and expenditures, the monetary system and international trade. Together these public and private choices determine the nation's prosperity and shape the distribution of its wealth. Since every social relationship has economic aspects, an understanding of economic principles and systems is an integral part of a liberal education.

Economics majors have a wide choice of careers. Many supplement their major with cognate courses to prepare for careers in business, journalism, health care administration or public service. Others find it excellent preparation for law school. Ph.D. graduates in economics are in demand at universities, corporations, financial institutions and government agencies. M.A. graduates may teach at junior colleges but more typically go into business or public service.

BELZER, MICHAEL H.: Ph.D., M.S., B.A., Cornell University; Associate Professor
COTTER, KEVIN: Ph.D., University of Minnesota; B.S., Purdue University; Associate Professor and Chair
DANAGOULIAN, SHOOSHAN: Ph.D., Cornell University; M.S., London School of Economics; M.A., University of Pennsylvania and Cornell University; B.A., Johns Hopkins University; Assistant Professor
GOODMAN, ALLEN C.: Ph.D., Yale University; B.A., University of Michigan; Professor
HUI, LIANG: Ph.D., M.A., University of Rochester; Associate Professor
JENSEN SUMMERS, GAIL A.: Ph.D., University of Minnesota; M.S., Iowa State University; B.A., Southern Connecticut State College; Professor
KAMADA, VITOR: Ph.D., Georgia Institute of Technology; M.A.s, Toulouse School of Economics, State University of Campinas; B.A., University of Sao Paulo; Lecturer
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YOO, YOUNG-RO: Ph.D., Cornell University; B.A., Seoul National University; Associate Professor
ZHU, ZHE (ALBERT): Ph.D., University of Virginia; M.A., University of Iowa; B.A., Wuhan University; Assistant Professor

Introductory Economics

ECO 1000 Survey of Economics Cr. 4
Satisfies General Education Requirement: Social Inquiry, Social Sciences
Scope of economics and the task of the economist in modern society; the market economy, its evolution and development; non-market economies; economic problems and prospects in the contemporary world. Not for ECO major or minor credit. Offered Every Term.

ECO 1400 Economic Inequality Cr. 4
Provides students with a broad survey of economic inequality. Covers conceptual debates on inequality, starting with varying theories that explain inequality. A unit will focus on inequality in the United States and in industrially developed nations, and a unit will focus on the tension between global inequalities as well as the emerging global middle class. Examines the divergent outcomes for the middle and working class in industrially developed (wealthy) nations as well as the growing global middle class, especially from emerging nations such as China and India. Offered Fall, Winter.

ECO 1600 Introduction to Economic Thought Cr. 4
Provides students with a broad historical survey of the field of economics, starting from the pre-industrial era. The course looks at economic ideas starting from the classical thinkers (Smith, Bentham, Malthus, Ricardo, Mill, and Marx) to the emergence of modern classical economics and institutional (Marshall and Veblen). It completes the survey by examining the development of macroeconomics of Keynes and his critics (Hayek, Schumpeter, and Friedman) and presents the modern contest of ideas, culminating with the economic consequences of the 2008 Financial Crisis. Offered Fall, Winter.

ECO 2010 Principles of Microeconomics Cr. 4
Satisfies General Education Requirement: Social Inquiry, Social Sciences
Supply, demand, price at the level of the firm and industry; business institutions and their operation; determinants of wage and salary levels, interest rates, rent, profits, income distribution; public policy in relation to business and labor. This course satisfies Society of Actuaries Validation by Educational Experience (VEE) in Economics when taken with ECO 2020 with a B- or better in each course. Offered Every Term.

ECO 2020 Principles of Macroeconomics Cr. 4
Satisfies General Education Requirement: Social Inquiry, Social Sciences
Determinant of national income, consumption and saving, and investment; money, banking and the Federal Reserve; inflation and unemployment; monetary and fiscal policy; economic growth and productivity; the international sector. This course satisfies Society of Actuaries Validation by Educational Experience (VEE) in Economics when taken with ECO 2010 with a B- or better in each course. Offered Every Term.
Field A: Economic Theory

ECO 5000 Intermediate Microeconomics Cr. 4
Theory of the firm and consumer. Analysis of a price system as a means to efficient allocation of productive resources. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ECO 2010 with a minimum grade of C and (MAT 1800-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)

ECO 5020 Fundamentals of Economic Analysis I Cr. 4
This course assumes good knowledge of first semester calculus, and teaches additional mathematics necessary for Ph.D. study in economics, and (to a lesser extent) teaches some economic implications; course content includes: matrices, vectors and linear algebra; partial and total derivatives; scalar and vector functions; Jacobian derivative matrices and determinants; implicit function theorem; derivatives of implicit functions with one or more endogenous variables; unconstrained maximization with two or more variables; Lagrangians and constrained maximization; envelope theorem; differential and difference equations, and systems of differential and difference equations. Offered for undergraduate credit only. Offered Fall.
Prerequisites: ECO 5000 with a minimum grade of C and MAT 2010-6XXX with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5050 Intermediate Macroeconomics Cr. 4
Theory of national income determination. National output and income, saving and capital formation. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ECO 2010 with a minimum grade of C and (MAT 1800-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 6000 Price and Allocation Theory Cr. 4
Introduction to the theory of consumer choice and the theory of production, and other selected topics. Primarily for M.A. students and for Ph.D. students who want to review. Offered Fall.
Prerequisite: ECO 5000 with a minimum grade of C and MAT 2010 with a minimum grade of C

Field B: Quantitative Methods

ECO 5100 Introductory Statistics and Econometrics Cr. 4
Elementary probability theory, discrete and continuous probability distribution, sampling distribution, interval estimation, hypothesis testing, and estimation and inference in simple and multiple regression models. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ECO 2010 with a minimum grade of C, ECO 2020 with a minimum grade of C, and (MAT 1800-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)
Restriction(s): Enrollment is limited to Undergraduate level students.

Field C: Industrial Organization

ECO 5200 Regulation and Regulated Industries Cr. 4
Transportation economics. Regulation of transportation as an example of public control of business; the rationale for having public regulation, and the analysis of its economic effects; reform of the scope and practice of regulation; public ownership; regulation of occupational and product safety standards and environmental standards. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5210 Market Power and Economic Welfare Cr. 4
Monopoly, oligopoly, and competition in U.S. industry; sources of market power and their effect on prices, profits, and technological progress. Case studies. Selected topics in antitrust policy. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: (MAT 1800-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4), ECO 2010 with a minimum grade of C, and ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5230 Environmental Economics Cr. 4
Externality as the cause of environmental degradation and climate change. Externality in turn results from the failure of the market to develop prices that reflect the full global cost of production and consumption. The course also pays attention to normative issues. The population over which the normative issues are defined may include animals, plants and inanimate objects. Behavioral economics, in particular, will be brought to bear on the discussion throughout the course. Offered Fall, Winter.
Prerequisites: ECO 1000 with a minimum grade of D- or ECO 2010 with a minimum grade of D-

ECO 5250 Economic Analysis of Law II: Applications of Statistics and Econometrics Cr. 4
Economic analysis of property rights, torts, contracts, criminal law, the law of business organizations and financial markets, and the law of taxation. Economic analysis of litigation; the use of economics and statistics in litigation. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5260 Economic Analysis of Law II: Applications of Statistics and Econometrics Cr. 4
Examine applications of statistics and econometrics to legal issues that have been considered by the courts. Offered Winter.
Prerequisites: (I of MAT 1800-6XXX with a minimum grade of C+, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4) and ECO 2010 with a minimum grade of C+ or ECO 5100 with a minimum grade of C+
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5270 Games of Strategy Cr. 4
Game theory studies how individuals, groups and firms make their decisions strategically when their actions affect each other. Introductory course with emphasis on applications to firms and markets. Standard concepts such as games with sequential moves, simultaneous moves, pure and mixed strategies, uncertainty, and repetition. Special topics include bargaining, strategic innovation, cooperative pricing, contract designs, incentive mechanisms, bidding, and auctions. Students do not need to know calculus to follow the lectures. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: MAT 1800-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg ACT/SAT with a test score minimum of 4
Restriction(s): Enrollment is limited to Undergraduate level students.
ECO 5560 Pharmaceutical Economics Cr. 4
Introduces students to cost-effectiveness analysis and related economic tools used to determine the value of pharmaceuticals to society; tools which are increasingly being used by insurance programs to regulate access to drugs by patients. It will also cover the institutional landscape of the markets for development and sale of pharmaceuticals, with a focus on the features that have made pharmaceutical prices in the United States among the highest in the world, and policy options that are being considered to reduce these prices and that have become highly politically salient in recent years. Offered Yearly.
Prerequisite: ECO 5100 with a minimum grade of C or PH 3200 with a minimum grade of C or PH 3300 with a minimum grade of C or BA 2300 with a minimum grade of C or BA 3400 with a minimum grade of C or BA 6090 with a minimum grade of C or BIO 5040 with a minimum grade of C or STA 2210 with a minimum grade of C or PSY 2030 with a minimum grade of C or PSY 5100 with a minimum grade of C or SOC 3220 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

Field D: International Economics

ECO 5300 International Trade Cr. 4
Factors in international relations; patterns of international specialization; balance of international payments; foreign exchange; commercial policy of United States and other countries; foreign investment and economic development; international economic cooperation. Offered for undergraduate credit only. Offered Fall.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5310 International Finance Cr. 4
Major policy issues in the field of international finance with emphasis on open economy macroeconomics. Topics include the balance of payments and the foreign exchange market; monetary and fiscal policies in open economies; the floating exchange rate system; international financial markets; and European monetary integration. Offered for undergraduate credit only. Offered Winter.
Prerequisites: (MAT 1800 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4), ECO 2020 with a minimum grade of C, and ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

Field E: Labor and Human Resources

ECO 5400 Labor Economics Cr. 4
Economics of labor markets. Determinants of earnings and methods of compensation, labor supply and demand, effects of taxes and subsidies on labor supply, choices of occupation and level of schooling, promotion and turnover, employment discrimination, economic tools used to determine the value of pharmaceuticals to society; tools which are increasingly being used by insurance programs to regulate access to drugs by patients. It will also cover the institutional landscape of the markets for development and sale of pharmaceuticals, with a focus on the features that have made pharmaceutical prices in the United States among the highest in the world, and policy options that are being considered to reduce these prices and that have become highly politically salient in recent years. Offered Yearly.
Prerequisite: ECO 5100 with a minimum grade of C or PH 3200 with a minimum grade of C or PH 3300 with a minimum grade of C or BA 2300 with a minimum grade of C or BA 3400 with a minimum grade of C or BA 6090 with a minimum grade of C or BIO 5040 with a minimum grade of C or STA 2210 with a minimum grade of C or PSY 2030 with a minimum grade of C or PSY 5100 with a minimum grade of C or SOC 3220 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5480 Economics of Work Cr. 3
Theoretical and empirical treatment of: labor market characteristics; labor demand and supply; issues of race, gender, and age; compensation and pay; issues of health and productivity; bargaining processes and the effects of unions; unemployment and job search; globalization. No economics major or minor credit. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C, ECO 2020 with a minimum grade of C, or ECO 1000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BA in Labor Studies program; enrollment is limited to Undergraduate level students.

ECO 5490 American Labor History Cr. 4
Development of the American labor movement; its behavior in the contemporary scene. Labor's experiments with social, political, legal, and economic institutions. Comparisons with foreign labor movements. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: HIS 5290

Field F: Public Economics

ECO 5500 Public Finance Cr. 4
Theory and practice of state and local government taxation and expenditure. Attention devoted to State of Michigan and municipalities in Detroit metropolitan area. Topics include: government organization, voting and mobility models, property and sales taxes, user charges, grants, education expenditure, and economic development. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5550 Economics of Health Care Cr. 4
Allocation of health care resources, with respect to demand and supply of health care. Role of hospitals, physicians, and health insurance; market imperfections and their role in the economics of health care. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 5000 with a minimum grade of C (may be taken concurrently)

ECO 5560 Pharmaceutical Economics Cr. 4

ECO 5570 Money and Banking Cr. 4
Role of the Federal Reserve System, the commercial banks, and the non-bank public (including financial intermediaries) in determining the money supply; central banking and techniques of monetary control; indicators and targets of monetary policy; and how money affects economic activity. Offered Fall, Winter.
Prerequisites: (MAT 1800 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4), ECO 2020 with a minimum grade of C, and ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.
ECO 5720 Financial Economics Cr. 4
Fundamentals of investments: investment and financial markets, theoretical models of investment theory including efficient market hypothesis (EMH) and capital asset pricing model (CAPM); characteristics and analysis of stocks, bonds, and portfolios; equity evaluation through financial statements, industry analysis, and macroeconomic analysis; and advanced topics in either derivative assets (futures and options) or international investments. Offered for undergraduate credit only. Offered Winter.
Prerequisites: ECO 2010 with a minimum grade of C, ECO 2020 with a minimum grade of C, ECO 5050 with a minimum grade of C, and (MAT 1800-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)
Restriction(s): Enrollment is limited to Undergraduate level students.

Field H: Urban and Regional Economics
ECO 5800 Urban and Regional Economics Cr. 4
Introduction to the economic foundations of urban problems; land use, housing, poverty, transportation, local public finance; regional industry mix, income, growth and development; the national system of cities and location of firms. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: UP 5820

Directed Readings and Special Courses
ECO 3990 Directed Study Cr. 1
For the student who shows evidence of ability and interest in economic study and who desires opportunity for advanced reading in a special field. Arrange with advisor. Offered Every Term.
Prerequisites: ECO 1000-ZZZZ with a minimum grade of B
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Economics or Economics Honors; enrollment is limited to students in the Department of Economics.
Repeatable for 2 Credits

ECO 4991 Research in Economics Cr. 3-12
Economic research on an appropriate topic of the student's choice, conducted under faculty supervision. Does not count toward 32-credit requirement for the ECO major. Offered Every Term.
Prerequisites: ECO 1000-ZZZZ with a minimum grade of B
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Economics or Economics Honors; enrollment is limited to students in the Department of Economics.
Repeatable for 12 Credits

ECO 4997 Senior Honors Research Cr. 4
Individually arranged meetings with faculty member to discuss research methodology and readings in areas of research selected by instructor. A senior honors essay of a length proportionate to the selected topic will be required. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Economics Honors; enrollment is limited to Undergraduate level students; enrollment limited to students in a Bachelor of Arts degree; enrollment is limited to students in the Department of Economics.
Repeatable for 12 Credits

ECO 5993 Writing Intensive Course in Economics Cr. 0
Satisfies General Education Requirement: Writing Intensive Competency
Disciplinary writing assignments under the direction of a faculty member. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: ECO 5000-9999 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students.