201 Introduction to Microeconomics
Fall, Spring, Summer. 3(3-0) Not open to students with credit in EC 251H.
Economic institutions, reasoning and analysis. Consumption, production, determination of price and quantity in different markets. Income distribution, market structure and normative analysis.

202 Introduction to Macroeconomics
Fall, Spring, Summer. 3(3-0) Not open to students with credit in EC 252H.

210 Economics Principles Using Calculus
Fall. 3(3-0) P: MTH 133 or MTH 153H or MTH 126 Not open to students with credit in EC 201 or EC 202.
A combined microeconomics and macroeconomics course. Emphasis on topics of interest in engineering and management, such as discounting, cost-benefit analysis, innovation, externalities, and the role of government regulation.

251H Microeconomics and Public Policy
Fall, Spring. 4(4-0) Not open to students with credit in EC 301.
Theories of consumer behavior, production and cost. Output and price determination in competition and monopolies. Welfare economics, general equilibrium, externalities, and public goods.

252H Macroeconomics and Public Policy
Fall, Spring. 3(3-0) P: (EC 201 and EC 301) or EC 251H Not open to students with credit in EC 302.
Theory of national income, unemployment, inflation and economic growth and its application to economic analysis and policy.

293 Cooperative Education for Business Students
Fall, Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. Intersessional with Accounting and Finance and Hospitality Business and Management and Supply Chain Management. Administered by Supply Chain Management. R: Approval of department.
SA: MSC 293
Integration of pre-professional educational employment experiences in industry and government with knowledge and processes taught in the student's academic program. Educational employment assignment approved by the Department of Supply Chain Management.

301 Intermediate Microeconomics
Fall, Spring, Summer. 3(3-0) P: EC 201 and (MTH 124 or MTH 132 or MTH 152H or LB 118) RB: EC 202 Not open to students with credit in EC 251H.
Theories of consumer choice, production, cost, perfect competition, and monopoly. Welfare economics, general equilibrium, externalities, and public goods.

302 Intermediate Macroeconomics
Fall, Spring, Summer. 3(3-0) P: (EC 201 or EC 251H) and EC 202 Not open to students with credit in EC 252H.

306 Comparative Economic Systems
Fall. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H)
Characteristics and functions of economic systems. Alternative patterns of economic control, planning, and market structure. Theories, philosophies, and experiences associated with capitalism, socialism, and mixed economies.

310 Economics of Developing Countries
Spring. 3(3-0) P: EC 201 or EC 251H Not open to students with credit in EC 410.
Economic policies and policy issues of developing countries such as modern economic growth and structural transformation, state controls versus markets, poverty and human welfare, investments in human resources, and trade and industrialization.

330 Money, Banking, and Financial Markets
Fall, Spring, Summer. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H)
Money markets and financial intermediation. Money, the Federal Reserve System, and monetary policy. Regulation of money markets.

333 Governments and Markets: When Laissez-Faire Fails
Fall, Spring, Summer. 3 credits. P: EC 201 or EC 251H.
Economic and philosophical underpinnings of governmental intervention in the economy. Critical analysis of governmental interventions as solutions to contemporary economic and social problems.

335 Taxes, Government Spending and Public Policy
Fall, Spring, Summer. 3(3-0) Interdepartmental with Environmental Economics and Policy. Administered by Economics. P: EC 201 or EC 251H SA: PRM 335 Not open to students with credit in EC 435 or EC 436.
Economic and political analysis of governmental intervention policies. Administration and externalities, design and incidence of the tax system. Equity and efficiency effects of government programs.

340 Survey of International Economics
Fall, Spring, Summer. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H) Not open to students with credit in EC 440 or EC 441.

360 Private Enterprise and Public Policy
Fall, Spring, Summer. 3(3-0) P: EC 201 or EC 251H
Effects of antrust, economic regulation, and other public policies on competition, monopoly, and other market problems in the United States economy.

370 Economics of Sports
Summer. 3(3-0) P: EC 201
Economic analysis of sports teams, leagues, and institutions. Strategic considerations, demand and pricing, betting markets, optimal compensation for athletes, the market for superstars, anti-trust and public finance issues.

380 Labor Relations and Labor Market Policy
Fall, Spring, Summer. 3(3-0) P: EC 201 or EC 251H Not open to students with credit in EC 480.
Development, functions, legal framework, and economic effects of union bargaining. Institutions and economic impacts of government programs. Minimum wages, workers' compensation, unemployment insurance, and antidiscrimination policies.

391 Special Topics in Economics
Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: (EC 201 or EC 251H) and (EC 202 or EC 252H) R: Approval of department.
Special topics supplementing regular course offerings.

401 Advanced Microeconomics
Fall, Spring. 3(3-0) P: EC 251H or EC 301 Economics of uncertainty and incomplete information. Game theory and theories of oligopoly. Transaction costs. Advanced topics in welfare economics, general equilibrium, externalities, and public goods.

402 Advanced Macroeconomics
Fall, Spring. 3(3-0) P: (EC 251H or EC 301) and (EC 252H or EC 302)
Consumption, investment, and monetary theories. The role of expectations. Theories of economic growth and cycles. Stabilization policies.

406 Economic Analysis of Russia and the Commonwealth of Independent States (W)
Spring of even years. 3(3-0) P: (EC 202 or EC 252H) and (EC 301 or EC 251H) and Completion of Tier I Writing Requirement.
Analysis of structure and performance of planning, transition economy, and post-transition economy in Russia and the Commonwealth of Independent States (CIS) with focus on micro foundations of macroeconomic outcomes.

410 Issues in the Economics of Developing Countries (W)
Fall. 3(3-0) P: (EC 202 or EC 252H) and (EC 301 or EC 251H) and Completion of Tier I Writing Requirement.
Topics in development economics, such as growth, technological change, structural transformation, poverty and inequality, investment in human resources, trade, international capital flows, and the political economy of policy formation and governance.

412 Economic Analysis of Latin America (W)
Fall of even years. 3(3-0) P: (EC 202 or EC 252H) and (EC 301 or EC 251H) and Completion of Tier I Writing Requirement.

413 Economic Analysis of Asia (W)
Spring of odd years. 3(3-0) P: (EC 202 or EC 252H) and (EC 301 or EC 251H) and Completion of Tier I Writing Requirement.
Development of agriculture, industry, labor markets, and trade in some of the following: India and South Asia, China, the Pacific Rim countries, and Japan. Productivity, income distribution, finance, and planning.
414 Economic Analysis of Sub-Saharan Africa (W) Fall of odd years. 3(3-0) P: (EC 202 or EC 252H) and (EC 301 or EC 251H) and Completion of Tier I Writing Requirement. African economic development in historical perspective. Contemporary development issues including agricultural policies, industrial development, foreign trade and aid, human resource investments, AIDS, and the political economy of economic and political policies and reforms.

420 Introduction to Econometric Methods Fall, Spring. 3(3-0) P: (EC 202 or EC 252H) and (EC 251H or EC 301) and (MTH 124 or MTH 132 or MTH 152H or LB 118) and (STT 315 or STT 421 or STT 430 or STT 441). Specification, estimation, and interpretation of econometric models. Evaluation of current quantitative work in economics.

421 Advanced Econometric Methods Spring of even years. 3(3-0) P: (EC 420). Panel data methods, instrumental variables, limited dependent variables, time series analysis, and other advanced topics.

425 Law and Economics (W) Fall. 3(3-0) Interdepartmental with Finance. Administered by Economics. P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Application of economic analysis to the law. Property rights, takings, the Coase Theorem. The economics of regulation, crime and punishments, liability law, and public choice.

435 Public Expenditures (W) Fall. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Expenditure theory. Objectives and rationale of government activity in the market system. Efficiency criteria in government decision-making. Public choice. Cost benefit analysis.

436 Public Revenues (W) Spring. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Principles and theory of efficiency and the incidence of taxation. Income and sales taxes and other major revenue sources.

440 International Trade (W) Fall. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Foundations of the theory of international trade. Comparative advantage, specialization, and gains from trade. International trade theory and policy. Contemporary issues.

441 International Finance (W) Spring. 3(3-0) P: (EC 251H or EC 301) and (EC 252H or EC 302) and Completion of Tier I Writing Requirement. Classical and modern theories of the international economy. Balance of payments, capital flows, exchange rates, and international monetary systems. Contemporary issues.

450 Economics of Environmental Policy (W) Spring. 3(3-0) P: (EC 301 or EC 251H) and Completion of Tier I Writing Requirement. Environmental economics. Theory of pollution control and environmental policy. Design of optimal policies. Contemporary issues.

460 American Industry: Structure and Behavior (W) Fall, Spring. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Market structure and performance. Empirical analysis of market definition, concentration, product differentiation, vertical integration, innovativeness, collusion, and entry deterrence.

480 Analysis of Labor Markets (W) Fall, Spring. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Labor supply and demand. Human capital, search, migration, and labor turnover. Analysis of unemployment and wage growth. Structure of wages, including economics of discrimination.

485 Economics of Education (W) Fall. 3(3-0) P: (EC 301 or EC 251H) and Completion of Tier I Writing Requirement. The intersection of economics and education with a focus on U.S. education policy. Human capital, education production, and education reforms.

490 Independent Study Fall, Spring, Summer. 1 to 3 credits. A student may earn up to 9 credits in all enrollments for this course. P: (EC 202 or EC 252H) and (EC 251H or EC 301). Approval of department. Research and reading course for students interested in doing independent work in economics under faculty supervision.

491 Advanced Topics in Economics Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: (EC 251H or EC 301) and (EC 252H or EC 302) and (MTH 124 or MTH 132 or MTH 152H). Approval of department. Advanced work in specialized topics of economics.

495 Economics of Poverty and Income Distribution (W) Fall. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Theory of the distribution of income and wealth. Concepts and measurement of welfare. Definition of poverty. Effects of public and private programs on the poor.

498 Economics of Health Care (W) Fall of odd years. 3(3-0) P: (EC 251H or EC 301) and Completion of Tier I Writing Requirement. Economic factors in determining health care costs, utilization, quality, and efficiency. Demand and insurance. Comparative health care systems. Public policy issues.

499 Senior Seminar for Economics Majors (W) Fall, Spring. 3(3-0) P: (EC 251H or EC 301) and (EC 252H or EC 302) and (EC 420 and completion of Tier I writing requirement) R: Open only to seniors in the Department of Economics. Capstone course for economics majors. Reading and discussion concerning selected economics topics. Preparation and presentation of student research project.

810 Institutional and Behavioral Economics Fall. 3(3-0) Interdepartmental with Agricultural Economics. Administered by Agricultural Economics. R: EC 301. Relationships among institutions, individual and collective actions, and economic performance. Public choice, property rights, and behavioral theories of firms and bureaucracies.

811A Mathematical Applications in Economics Fall. 2(2-0) R: Open only to doctoral students in the Economics major or the Department of Agricultural Economics or the Business Administration major or approval of department. C: EC 812A. Applications of mathematical tools in economic analysis for Ph.D. students. Matrix algebra, derivatives, partial derivatives, optimization, integration and linear differential equations.


812A Microeconomics I Fall. 3(3-0) R: Open to doctoral students in the Eli Broad College of Business and The Eli Broad Graduate School of Management or in the Department of Agricultural, Food, and Resource Economics or in the Economics major or approval of department. C: EC 811A. Consumption theory, including choice under uncertainty. Theory of production in perfectly competitive markets. General equilibrium in the presence of perfect competition. Efficiency properties of competitive equilibria.

812B Microeconomics II Spring. 3(3-0) P: EC 812A. Introduction to social choice. Market failure, including externalities, public goods, imperfect information and market power.

813A Macroeconomics I Fall. 3(3-0) R: Open only to doctoral students in the Economics major or the Department of Agricultural Economics or the Business Administration major or approval of department. Static and dynamic macroeconomic models. Search asset pricing, new classical theories of business cycles and growth. Rational expectations and the government budget constraint.

813B Macroeconomics II Spring. 3(3-0) P: EC 813A C: EC 811B. New classical theories of business cycles and growth. Theories of price and wage rigidities, search, imperfect competition, and credit rationing in macroeconomic models. Asset pricing.

820A Econometrics IA Fall. 3(3-0) Interdepartmental with Statistics and Probability. Administered by Economics. R: Open only to doctoral students in the Economics major or the Department of Agricultural Economics or the Business Administration major or approval of department. Statistical tools for econometrics. Applications of statistical tools, including probability distributions, estimation, hypothesis testing, and maximum likelihood to econometric problems.
820B Econometrics IB
Spring. 3(3-0) P: EC 811A and EC 820A

821A Cross Section and Panel Data Econometrics I
Fall. 3(3-0) Interdepartmental with Agricultural Economics and Finance and Statistics and Probability. Administered by Economics. P: EC 820B SA: EC 821
Analyses of systems of equations, panel data models, instrumental variables and generalized method of moments, estimation, quantile regression, maximum likelihood estimation, binary and multinomial response models, Tobit and two-part models, and other selected topics.

821B Cross Section and Panel Data Econometrics II
Spring. 3(3-0) Interdepartmental with Agricultural Economics and Finance and Statistics and Probability. Administered by Economics. P: EC 820B SA: EC 822
Analyses of quasi-maximum likelihood estimation, count data models, fractional response models, duration models, sample selection and attrition, stratified sampling, estimating treatment effects, stochastic frontier models, and other advanced topics.

822A Time Series Econometrics I
Fall. 3(3-0) Interdepartmental with Agricultural Economics and Finance and Statistics and Probability. Administered by Economics. P: EC 820B SA: EC 822
Analyses of time series regression, stationary time series analysis, ARMA models, Wold decomposition, spectral analysis, vector autoregressions, generalized method of moments, functional central limit theorem, nonstationary time series, unit root processes, cointegration, and other advanced topics.

822B Time Series Econometrics II
Spring. 3(3-0) Interdepartmental with Agricultural Economics and Finance and Statistics and Probability. Administered by Economics. P: EC 822A
Analyses of nonlinear time series, time series volatility models, long memory, nonlinear time series models, and other advanced topics.

823 Applied Econometrics
Fall. 3(3-0) P: EC 820A and EC 820B
Problems of estimating models and testing hypotheses from economic theory. Applications of various econometric models to economic problems and policy analysis.

829 Economics of Environmental Resources
Spring. 3(3-0) Interdepartmental with Community, Agriculture, Recreation and Resource Studies and Agricultural Economics and Forestry and Fisheries and Wildlife. Administered by Agricultural Economics. RB: Undergraduate intermediate microeconomics, calculus, and statistics
Economic principles, theoretical models, and empirical methods related to environmental problems and public policies. Applications to air, land, water, forests, energy, fish and wildlife, and climate change, including in developing countries.

830 Advanced Macroeconomics and Monetary Theory
Fall. 3(3-0) P: EC 812B and EC 813B

831 Problems in Monetary Theory and Policy
Spring. 3(3-0) P: EC 813A and EC 820A
Topics on macroeconomics with a strong applied emphasis.

835 Public Expenditures
Fall. 3(3-0) P: EC 812A
Allocative and distributional effects of public expenditure. Public goods and externalities. Selected topics in public expenditure analysis such as cost-benefit analysis, fiscal federalism, mechanism design, public choice, and general equilibrium models.

836 Public Revenues
Spring. 3(3-0) P: EC 812A

840 International Trade: Theory and Commercial Policy
Fall. 3(3-0) P: EC 812A
Commodity composition of trade. Welfare and distributional effects of measures such as tariffs, quotas, and export subsidies. International economic policy. Regional and multilateral trade policy.

841 Exchange Rates and Capital Flows
Spring. 3(3-0) P: EC 813A

843 Advanced Topics in International Trade
Spring. 3(3-0) P: EC 812A and EC 812B and EC 840
Selected topics in international trade.

850 Growth, Development, and Human Resources
Fall. 3(3-0) P: EC 812A
Theoretical and empirical models of the microeconomics of development, focusing on household and individual behavior related to investment in human resources and its consequences.

851 Microeconomics Dynamics in Development
Spring. 3(3-0) P: EC 812A and EC 813A
Theoretical and empirical models of the microeconomics of development, focusing on land, labor, credit and insurance markets. Analysis of household and individual responses to risk, dynamic decisions with respect to savings, consumption and labor supply, and models of learning. EC 851 is designed to be a continuation of EC 850.

860 Market Structure and Behavior
Fall. 3(3-0) P: EC 812A
The consequences of concentration and entry conditions. Theory of the firm as it relates to size, scope, integration, and motivation. Static market behavior. Antitrust treatment of cartels and mergers.
Research Seminars in Advanced Topics in Economics
Fall, Spring. 1(1-0) A student may earn a maximum of 2 credits in all enrollments for this course.
Current research topics in applied economics.

Advanced Topics in Economics
Fall of odd years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. RB: EC 811A and EC 811B and EC 812A and EC 812B and EC 813A and EC 813B and EC 820A and EC 820B R: Open only to doctoral students in the Economics major or approval of department.
Advanced work in a specialized topic in economics.

Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to doctoral students.
Doctoral dissertation research.