

Economics (ECON)

Courses

ECON 52403. Managerial Economics. 3 Hours.

This course will provide students with a strong foundation in core economics principles, with emphasis on industrial organization issues and applications geared toward the supply-chain and retail focus of the redesigned MBA program. (Typically offered: Fall and Spring)

ECON 52503. Economics of Management and Strategy. 3 Hours.

Information economics and applied game theory. (Typically offered: Irregular)

ECON 52603. Applied Microeconomics. 3 Hours.

The framework for this course is the economic way of thinking. Both the theory and application of important economics questions are presented, showing students the applicability of various economic methodologies in a number of different contexts. To gain competence in the applied side of economic analysis, students will use MS Excel or other software to apply class concepts to solve concrete problems. Prerequisite: ECON 52403 and (ECON 57403 or AGE 56103). (Typically offered: Spring)

ECON 54203. Behavioral Economics. 3 Hours.

Both economics and psychology systematically study human judgment, behavior, and well-being. This course surveys attempts to incorporate psychology into economics to better understand how people make decisions in economic situations. The course will cover models of choice under uncertainty, choice over time, as well as procedural theories of decision making. Graduate degree credit will not be given for both ECON 44203 and ECON 54203. Prerequisite: ECON 22003 or ECON 21403. (Typically offered: Spring)

ECON 54303. Experimental Economics. 3 Hours.

The course offers an introduction to the field of experimental economics. Included are the methodological issues associated with developing, conducting, and analyzing controlled laboratory experiments. Standard behavioral results are examined and the implications of such behavior for business and economic theory are explored. Graduate degree credit will not be given for both ECON 44303 and ECON 54303. Prerequisite: ECON 22003 or ECON 21403. (Typically offered: Fall)

ECON 57403. Introduction to Econometrics. 3 Hours.

Introduction to the application of statistical methods to problems in economics. Graduate degree credit will not be given for both ECON 47403 and ECON 57403. Prerequisite: ((ECON 21003 and ECON 22003) or ECON 21403) and ((MATH 22003 or MATH 24004 or higher)) and (BUSI 10303 or MATH 21003). (Typically offered: Spring)

ECON 57503. Forecasting. 3 Hours.

The application of forecasting methods to economics, management, engineering, and other natural and social sciences. The student will learn how to recognize important features of time series and will be able to estimate and evaluate econometric models that fit the data reasonably well and allow the construction of forecasts. Graduate degree credit will not be given for both ECON 47503 and ECON 57503. Prerequisite: (ECON 21003 and ECON 22003) or (ECON 21403) and (MATH 22003 or MATH 24004) and (BUSI 10303 or MATH 21003). (Typically offered: Fall)

ECON 57803. Applied Microeconometrics. 3 Hours.

This course covers the principles of causal inference. Methods include panel data models, instrumental variables, regression discontinuity designs, difference-in-differences, and matching. Emphasis on developing a solid understanding of the underlying econometric principles of the methods taught as well as on their empirical application. Prerequisite: ECON 57403 or AGE 56103. (Typically offered: Fall)

ECON 58103. Economic Analytics I. 3 Hours.

Part one of the capstone in the Masters in Economic Analytics. The course provides an overview of modern statistical learning methods, including Machine Learning, along with hands-on experience of in-depth analytics exercises using real data. Students will be given a set of datasets early in the semester and will use them for in-class exercises, assignments, and a class project. Students will make use of the most advanced learning libraries available in Python to gather and organize data as well as to train, validate, and test their empirical models. Prerequisite: ECON 47403 or ECON 57403 or ISYS 41903. (Typically offered: Fall)

ECON 58203. Economic Analytics II. 3 Hours.

Part two of the capstone in the Masters in Economic Analytics. The MS in Economic Analytics is a professional degree primarily designed to lay a strong foundation for a career in economic analytics. The career preparation culminates with a capstone project. In this course, students work in small teams to (i) develop capstone topics, (ii) formulate hypotheses related to their projects, (iii) find appropriate datasets, and (iv) analyze their datasets to test hypotheses using the econometric models/ techniques that they have learned over the course of the program. Prerequisite: ECON 58103. (Typically offered: Spring)

ECON 58303. Data Exploration and Communication for Economics. 3 Hours.

The course focuses on developing the skills to acquire, prepare, explore, and analyze different types of data, and communicate the results. Topics include understanding the structure of business and economic data, preparing data for analysis, fundamentals of exploratory data analysis, and presentation and communication of the results. Prerequisite: ECON 57403. (Typically offered: Fall)

ECON 58403. Economic Policy and Data Analysis. 3 Hours.

The course focuses on developing economic and data analysis skills to understand international, national, and regional macroeconomic policies. It emphasizes the use of data and economic theory to study macroeconomic indicators, macroeconomic topics such as national and regional income growth, monetary policies, employment, exchange rate regime; and other policy issues such as migration, environment and agriculture, and urban development. Prerequisite: ECON 57403 or instructor approval. (Typically offered: Spring)

ECON 6000V. Master's Thesis. 1-6 Hour.

Master's Thesis. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.

ECON 61303. Mathematics for Economic Analysis. 3 Hours.

This course will develop mathematical and statistical skills for learning economics and related fields. Topics include calculus, static optimization, real analysis, linear algebra, convex analysis, and dynamic optimization. Prerequisite: Graduate standing and MATH 24004 or equivalent. (Typically offered: Summer)

ECON 62103. Microeconomic Theory I. 3 Hours.

Introductory microeconomic theory at the graduate level. Mathematical formulation of the consumer choice, producer behavior, and market equilibrium problems at the level of introductory calculus. Discussion of monopoly, oligopoly, public goods, and externalities. (Typically offered: Fall)

ECON 62203. Microeconomic Theory II. 3 Hours.

Advanced treatment of the central microeconomic issues using basic real analysis. Formal discussion of duality, general equilibrium, welfare economics, choice under uncertainty, and game theory. (Typically offered: Spring)

ECON 63103. Macroeconomic Theory I. 3 Hours.

Theoretical development of macroeconomic models that include and explain the natural rate of unemployment hypothesis and rational expectations, consumer behavior, demand for money, market clearing models, investment, and fiscal policy. (Typically offered: Fall)

ECON 63203. Macroeconomic Theory II. 3 Hours.

Further development of macroeconomic models to include uncertainty and asset pricing theory. Application of macroeconomic models to explain real world situations. (Typically offered: Spring)

ECON 6360V. Special Problems in Economics. 1-6 Hour.

Independent reading and investigation in economics. (Typically offered: Fall, Spring and Summer) May be repeated for up to 9 hours of degree credit.

ECON 6430V. Seminar in Economic Theory and Research I. 1-3 Hour.

Seminar. (Typically offered: Fall) May be repeated for up to 7 hours of degree credit.

ECON 6440V. Seminar in Economic Theory and Research II. 1-3 Hour.

Independent research and group discussion. (Typically offered: Spring) May be repeated for up to 4 hours of degree credit.

ECON 66103. Econometrics I. 3 Hours.

Use of economic theory and statistical methods to estimate economic models. The single equation model is examined emphasizing multicollinearity, autocorrelation, heteroskedasticity, binary variables and distributed lags. Prerequisite: MATH 22003 and knowledge of matrix methods, which may be acquired as a corequisite, and ECON 22003, and an introductory statistics course or equivalent. (Typically offered: Fall)

ECON 66203. Econometrics II. 3 Hours.

Use of economic theory and statistical methods to estimate economic models. The treatment of measurement error and limited dependent variables and the estimation of multiple equation models and basic panel data models will be covered. Additional frontier techniques may be introduced. Prerequisite: ECON 66103. (Typically offered: Spring)

ECON 66303. Econometrics III. 3 Hours.

Use of economic theory and statistical methods to estimate economic models. Nonlinear and semiparametric/nonparametric methods, dynamic panel data methods, and time series analysis (both stationary and nonstationary processes) will be covered. Additional frontier techniques may be covered. Prerequisite: ECON 66103. (Typically offered: Spring)

ECON 67103. Industrial Organization I. 3 Hours.

This course will develop the theory of modern industrial organization. The latest advances in microeconomic theory, including game theory, information economics and auction theory will be applied to understand the behavior and organization of firms and industries. Theory will be combined with empirical evidence on firms, industries and markets. Prerequisite: ECON 62103 and ECON 62203. (Typically offered: Fall)

ECON 67203. Industrial Organization II. 3 Hours.

This course surveys firm decisions, including setting prices, choosing product lines and product quality, employing price discrimination, and taking advantage of market structure. It will also cover behavioral IO, which reconsiders the assumption that firms and consumers are perfectly rational and examines the role of regulation. Prerequisite: ECON 61303. (Typically offered: Spring)

ECON 68303. International Trade and Development I. 3 Hours.

A first graduate level course in development economics with a focus on foundational theoretical issues. We explore the causation, implications, and remedies for pervasive and persistent poverty in low-income countries. Emphasis will be primarily on microeconomics topics. May be taken either as a precursor to International Development Economics II or stand-alone. Prerequisite: ECON 62103, (ECON 66103 or AGECE 56103) or by instructor's permission. (Typically offered: Fall)

ECON 68403. International Trade and Development II. 3 Hours.

A second graduate level course in development economics that focuses on the empirical aspect of development in low-income countries. The course explores various microeconomics topics related to poverty, human capital accumulation, and their interactions with role of public policy. Prerequisite: ECON 62103, (ECON 66103 or AGECE 56103) or instructor consent. (Typically offered: Spring)

ECON 69103. Experimental Economics. 3 Hours.

The course develops advanced concepts in the use of controlled experiments to test economic theory and explore behavioral regularities relating to economics. The class focuses on the methodology of experimental economics while reviewing a variety of established results. Prerequisite: ECON 62103. (Typically offered: Fall)

ECON 69203. Experimetrics. 3 Hours.

This course covers econometric techniques commonly used in experimental economics but infrequently covered in standard econometrics classes, e.g., power tests, non-parametric tests of means, simulated data, dealing with discrete and ordinal data, finite mixture models, structural estimation. This is an applied course and instruction will lean heavily on examples. Prerequisite: ECON 62103 and ECON 62203. (Typically offered: Fall)

ECON 69303. Behavioral Economics. 3 Hours.

This course surveys the frontier of behavioral economics, both theoretical and applied. Standard economic theory serves as a base for economics analysis, but when deviations from standard predictions are regularly and systematically observed, models have to be modified to account better predict human behavior. Insights from psychology, biology, and neuroscience are incorporated economic models of both individual and strategic behavior. Prerequisite: ECON 62103 and ECON 62203. (Typically offered: Spring)

ECON 7000V. Doctoral Dissertation. 1-18 Hour.

Doctoral Dissertation. Prerequisite: Candidacy. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.