Economics (ECON)

Courses

ECON 5243. 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 5253. Economics of Management and Strategy. 3 Hours.
Information economics and applied game theory. (Typically offered: Irregular)

ECON 5263. 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 5243 and (ECON 5743 or AGEC 5613). (Typically offered: Spring)

ECON 5423. 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 4423 and ECON 5423. Prerequisite: ECON 2023 or ECON 2143. (Typically offered: Spring)

ECON 5433. 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 4433 and ECON 5433. Prerequisite: ECON 2023 or ECON 2143. (Typically offered: Fall)

ECON 5743. 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 4743 and ECON 5743. Prerequisite: (ECON 2013 and ECON 2023) or (ECON 2143) and ((MATH 2043 or MATH 2554 or higher)) and (BUSI 1033 or STAT 2303). (Typically offered: Spring)

ECON 5753. 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 4753 and ECON 5753. Prerequisite: (ECON 2013 and ECON 2023) or (ECON 2143) and (MATH 2043 or MATH 2554) and (BUSI 1033 or STAT 2303). (Typically offered: Fall)

ECON 5763. Economic Analytics. 3 Hours.
This course provides students with a good overview of modern big data methods, including Machine Learning, along with hands-on experience of in-depth analytics projects using real data. After 3 weeks of introductory lectures on the big data methods by the instructor, students will form groups and propose research projects they will develop over the semester. Knowledge of some statistical software is recommended, including Python, R and MATLAB. Prerequisite: (ECON 5743 or AGEC 5613) and ECON 5783. (Typically offered: Spring)

ECON 5783. 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 5743 or AGEC 5613. (Typically offered: Fall)

ECON 5813. 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 4743 or ECON 5743 or ISYS 4193. (Typically offered: Fall)

ECON 5823. 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 5813. (Typically offered: Spring)

ECON 600V. Master's Thesis. 1-6 Hour.
Master's Thesis. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.

ECON 6133. 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 2554 or equivalent. (Typically offered: Summer)

ECON 6213. 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 6223. 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 6313. 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 6323. 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 636V. 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 643V. 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 644V. 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 6613. 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 2043
and knowledge of matrix methods, which may be acquired as a corequisite, and
ECON 2023, and an introductory statistics course or equivalent. (Typically offered:
Fall)

ECON 6623. 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 6613. (Typically offered:
Spring)

ECON 6633. 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 6613. (Typically offered: Spring)

ECON 6713. 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 6213 and ECON 6223. (Typically
offered: Fall)

ECON 6723. 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 6133. (Typically offered: Spring)

ECON 6833. 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 6213, (ECON 6613
or AGEC 5613) or by instructor's permission. (Typically offered: Fall)

ECON 6843. 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 6213, (ECON 6613 or
AGEC 5613) or instructor consent. (Typically offered: Spring)

ECON 6913. 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 6213. (Typically offered: Fall)

ECON 6923. 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 6213 and
ECON 6223. (Typically offered: Fall)

ECON 6933. 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 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 6213 and
ECON 6223. (Typically offered: Spring)

ECON 700V. Doctoral Dissertation. 1-18 Hour.
Doctoral Dissertation. Prerequisite: Candidacy. (Typically offered: Fall, Spring and
Summer) May be repeated for degree credit.