ECONOMICS (ECON)

Courses

ECON 505 MICRO ECONOMICS (1.5)
Covers comparative advantage, supply and demand, elasticity, opportunity cost, competition and monopoly, and externalities. Emphasizes understanding concepts that are useful in making effective choices in a variety of economic and managerial situations. Prerequisite: Graduate standing.

ECON 506 MACRO ECONOMICS (1.5)
Covers economic growth, monetary and fiscal policy, inflation and unemployment. Emphasizes understanding concepts, such as Federal Reserve policy, that are useful for managerial decision-making. Prerequisite: Graduate standing.

ECON 560 SURVEY OF ECONOMIC ISSUES (3)
A non-technical introduction to applied economic issues from the recent academic literature. Specific topics will vary by semester. Prerequisite: program admission or consent of program director.

ECON 570 TOPICS IN ECONOMICS (3)
Workshop designed to investigate special topics of current interest in economics. Introduction of a new course for possible addition to the curriculum or a select topic given mutual faculty and student interest. May be repeated for a maximum of 18 credits provided a different subject area is covered. Prerequisites: Consent of instructor.

ECON 593 WORKSHOP ON ECONOMIC EDUCATION (3)
Designed to help teachers and school administrators gain a better understanding of the economic working of the society in which we live. Prerequisite: Consent of department.

ECON 601 INTRODUCTION TO ECONOMETRICS (3)
The problem of testing economic theories against empirical data; the formulation and estimation of regression models; the use of the method of multiple regression in testing the various hypotheses of economic theories; serial correlation; the problem of identification; application of simultaneous equation model; the use and construction of econometric models for forecasting and policy making. Prerequisite: admission to the Economic Analytics MS program.

ECON 609 ECONOMIC THEORY (3)
This course studies models of consumer choice and firm behavior, including situations characterized by risk and uncertainty. We study how prices are determined by the interaction of consumers and firms in different market settings, and the role of prices in allocating resources. We also study how outcomes are influenced by strategic interaction and the information possessed by economic actors. The connection between economic theory and empirical analysis is emphasized. Prerequisite: program admission or consent of program director.

ECON 611 GAME THEORY (3)
Introduction to game theory and strategic behavior. Dominance, backward induction, Nash equilibrium, commitment, credibility, asymmetric information, and signaling. Applications from economics, politics, sociology, and other real-life situations. Prerequisite: ECON 609 or consent of instructor.

ECON 631 COMPUTATIONAL ECONOMICS (3)
Introduction to programming concepts and analysis of applied economic models using numerical methods. Procedural programming; functions; visualization; data mining; root finding algorithms; minimization routines; dynamic models. No prior programming skills required. Prerequisite: program admission or consent of program director.

ECON 632 MACHINE LEARNING FOR ECONOMICS (3)
Introduction to machine learning concepts and data analysis techniques with a focus on applications from economics using the Python programming language. Prerequisite: ECON 631.

ECON 641 CAUSAL INFERENCE (3)
An introduction to econometric methods used for causal inference. Using the potential outcomes framework, we discuss methods directed towards understanding causality using the techniques of randomized experiments, matching, instrumental variables, machine learning for causality, difference-in-differences, synthetic control methods, and regression discontinuity. Prerequisite: ECON 601.

ECON 643 IMPACT EVALUATION (3)
Determination of the causal effect of interventions by carefully understanding attribution and the practical applications of methodologies. Discussion about why and how different methods can produce a valid estimate of the impact of an intervention, how to select the appropriate method for the context, and their main limitations. The course is organized around specific examples from scientific literature. Prerequisite: ECON 601.

ECON 651 INTRODUCTION TO MATHEMATICAL ECONOMICS (3)
A study of the fundamental mathematical methods widely used in economics: calculus and linear algebra. Emphasis is on optimization theory, economic examples are used throughout. Prerequisite: program admission or consent of program director.

ECON 661 APPLIED ECONOMIC FORECASTING (3)
Basic concepts related to economic forecasting; visualization of economic data; construction of basic forecasting models; evaluation of models and their forecasts; decomposition of time series for forecasting and seasonal adjustment; concepts and applications of various exponential smoothing models. Students should have prior experience performing basic data analysis in Microsoft Excel and Stata. Prerequisite: program admission or consent of program director.

ECON 690 INDEPENDENT STUDY (1-3)
Individual and supervised study in selected areas of economics. Prerequisite: permission of department.

ECON 897 ECONOMICS THESIS (6)
Original research in economics using acceptable design and methodology. Supervised by one or more faculty members. Graded S/U. Prerequisite: consent of program director.

ECON 898 ECONOMICS THESIS (3)
Original research in economics using acceptable design and methodology. Supervised by one or more faculty members. May be repeated for a maximum of 6 units. Graded S/U. Prerequisite: consent of program director.

ECON 899 ECONOMICS THESIS CONTINUUM (1)
Continuation of graduate thesis. Supervised by one or more faculty members. Graded S/U based on making satisfactory progress on thesis. Prerequisite: consent of program director.