

Department of Economics  
Graduate Courses

613. Directed Studies in Economics II (1:3)

*Pr. graduate admission and permission of the Director of Graduate Study in economics and the professor who will supervise the study*

Individual study of an advanced topic in economics. Regular conferences with the instructor are required.

619. Mathematical Economics (3:3)

*Pr. 301, 319 or equivalent*

Reviews statistics and probability, matrix algebra and optimization and introduces theory and applications in integral calculus, and differential equations.

641. Microeconomics I (3:3)

*Pr. 301, 619 or permission of instructor*

Theory of consumer and firm behavior under certainty and uncertainty including exchange, production, income distribution, market structure and welfare economics.

642. Microeconomics II (2:2)

*Pr. 641 or permission of instructor*

An introduction to game theory, with an emphasis on real-world applications, empirical tests, and perfect information. Subjects covered include timing, equilibrium concepts, strategies, payoffs and solution techniques.

643. Econometric Methods (3:3)

*Pr. 351, 619 or permission of instructor*

Introduction to advanced econometric applications. Topics include seemingly unrelated regressions, simultaneous equations, identification, two-stage least squares, probit, tobit, sample selection models; application to economic data using Stata or other software.

644. Econometric Theory (3:3)

*Pr. 643 or permission of instructor*

Theory of econometric models. Topics include the standard linear model, classical assumptions, violations of assumptions, hypothesis testing, and corrective procedures; application to economic data using SAS or other statistical software.

646. Macroeconomics (3:3)

*Pr. 619, 641, or permission of instructor*

Advanced theory of aggregate economic activity. Economic models developed to explain economic growth, activity, and fluctuations based on classical, Keynesian, monetarist, and new classical schools of thought.

652. Advanced Economic and Business Statistics I (1.5-3)

*Pr. MBA 600, MBA 610 or permission of instructor*

Topics will include regression analysis, analysis of variance, and nonparametric tests. SAS is

employed.

691. Economics Internship (1-3)

*Pr. permission of the M.A. Program Director*

Individual course of study consisting of an applied economics and/or data analysis component and written work that complements the program's academic work. Supervised by faculty and an appropriate manager. May be repeated. Maximum of 3 credit hours may apply toward M.A. degree.

694. Literature Review Seminar (2:2)

*Pr. 644, 646 or permission of instructor*

Students present their proposed research project, write a literature review and present their on-going research.

695. Seminar and Research in Economics II (4:4)

*Pr. permission of Director of Graduate Study*

Supervised independent research culminating in the completion of an economic research paper or project. (Graded on S-U basis)

699. Thesis (1-6)

711. Experimental Course

This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

712. Directed Studies in Economics III (1-3)

*Pr. Permission of Director of Graduate Study*

Individual study of an advanced topic in economics. Regular conferences with the instructor are required. May be repeated for credit.

721. Empirical Microeconomics (1-4)

*Pr. 641, 643, 644, or permission of instructor*

Examines empirical investigations of advanced microeconomic theory including experimental and nonexperimental designs, and natural experiments. Applications vary by semester but are typically drawn from labor, health, public and financial economics. May be repeated for credit.

722. Time Series and Forecasting (1-4)

*Pr. 643, 644, 646 or permission of instructor*

Students learn to analyze and forecast time series data. Topics include stochastic linear difference equations, tests for trends and stationarity, and ARIMA modeling. Application to economic data emphasized. May be repeated for credit.

723. Predictive Data Mining (1-4)

*Pr. 643 and 644 or permission of instructor*

Provides a working knowledge of statistical tools important to the emerging and practically

relevant field of predictive data mining and the discovery of patterns in big data sets. May be repeated for credit.

725. Data Methods in Economics (3:3)

*Pr. 721 or permission of instructor*

Advanced techniques in data preparation; topics include data formats, error checking, merging data, large data sets, and missing observations. Students work extensively with SAS and STATA in the UNIX environment.

726. Data Project in Economics (3:3)

*Pr. 725 or permission of instructor*

A supervised empirical project. Students identify research questions, develop empirical models and assemble data, test models and their predictions, and present results and interpretations orally and in writing.

731. Applied Policy Methods (2:2)

*Pr. 642 and 644 or permission of instructor*

Provides applied foundation for policy study with emphasis on an economic efficiency perspective including history of policy analysis, market and government failure, and alternative methods for policy analysis.

732. Applied Policy Analysis (2:2)

*Pr. 642 and 644 or permission of instructor*

Examines historical and methodological issues in applied economics research. Topics include the limitations of theoretical and empirical analysis; the question of progress in economics; and alternative approaches to economic analysis.

733. Special Topics in Applied Public Policy (2:2)

*Pr. 731 or permission of instructor*

Application of economic theory and policy evaluation tools to a specific public policy issue. May be repeated for credit when topic varies.

741. Advanced Mathematical Economics (3:3)

*Pr. 619, 641, or permission of instructor*

Mathematical concepts and techniques that are used in advanced economic theory. Material includes sets and functions, constrained and unconstrained programming, and difference and differential equations.

742. Advanced Microeconomic Theory (3:3)

*Coreq. 741 or permission of instructor*

Examines decision making by households and firms with an emphasis on the meaning and empirical interpretation of theoretical models. Topics include duality theory, general equilibrium, and welfare economics.

745. Advanced Econometric Theory (3:3)

*Coreq. 741 or permission of instructor*

Presents fundamental concepts in statistics and least squares estimation and inference within single-equation linear models, instrumental variable approaches, and multivariate regression contexts. Concludes with introduction to nonlinear regression. Includes lab.

754: Applied Theory I: Game Theory (2:2)

*Pr. 742 or permission of instructor*

Examines decision making under uncertainty and in strategic environments, covering probability and risk, expected utility, complete information games, and, more intensively, dynamic games and games of incomplete information.

755. Applied Theory I: Economics of Information (2:2)

*Pr. 742 or permission of instructor*

An examination of adverse selection and moral hazard in labor, insurance, and credit markets. Students learn the impact of information imperfections on individual choice, equilibrium, welfare and regulation.

756. Applied Theory III: Intertemporal Economics (2:2)

*Pr. 742 or permission of instructor*

Examines concepts and tools required to build and understand dynamic economic models; theory is applied to topics including job search, human capital formation, savings decisions, and related policy issues.

757. Applied Theory IV: Public Goods (2:2)

*Pr. 742 or permission of instructor*

Analysis of public goods, non-market decision-making, and the implications for public policy. Emphasis on constraints imposed by such decision-making on policy and evaluation of policies under alternative normative criteria.

758. Applied Theory V: Directed Study (2:2)

*Pr. 742 and approval of Director of Graduate Study*

A faculty-directed, independent study of applied theory for a topic particularly related to a student's primary field of interest. May replace ECO 755, 756, or 757.

761. Advanced Econometrics I (2:2)

*Pr. 745 or permission of instructor*

Advanced methods in microeconomic analysis. Covers M-estimators, maximum likelihood, generalized methods of moments, and discrete response models.

762. Advanced Econometrics II (2:2)

*Pr. 745 or permission of instructor*

Advanced methods in microeconometric analysis. Covers linear models for panel data with unobserved heterogeneity, count data, and duration analysis.

763. Applied Econometrics (1-4)

*Pr. 745 or permission of instructor*

Advanced methods in microeconomic policy evaluation. Issues include sample attrition, stratified sampling, and weighting procedures. Applications include estimating treatment effects, dealing with self-selection, and using duration analysis. Includes lab. May be repeated for credit.

771. Labor Economics. (1-4)

*Pr. ECO 742 and 745, or permission of instructor*

Examines the operation of the labor market, its institutions, and labor market policies. Topics include labor supply and demand, returns to education, family and household economics, wage inequality and unions. May be repeated for credit.

772. Public Economics. (1-4)

*Pr. ECO 742 and 745, or permission of instructor*

Examines governmental expenditures and taxes and the constraints imposed on them within a federal, multi-tiered governmental structure. Topics include education, public health, housing and community development, infrastructure, and environmental regulation. May be repeated for credit.

773. Health Economics. (1-4)

*Pr. ECO 742 and 745, or permission of instructor*

Examines the market for health services and the production of health. Topics include the demand and supply for health care professionals; health insurance and financing; and regulation of medical markets. May be repeated for credit.

775. Independent Field Course. (1-4)

*Pr. ECO 742, 745, and approval of Director of Graduate Study*

A faculty-directed, independent study of a research area that is particularly related to a student's primary field of interest. May be repeated for credit. May serve as one required major field course.

797. Seminar in Empirical Economics (3-6)

*Pr. permission of Director of Graduate Study*

A supervised seminar in which students formulate a major empirical research project and identify, collect and assemble the data required to pursue that research. May be repeated for credit.

798. Seminar in Economic Research (3-6)

*Pr. permission of Director of Graduate Study*

A supervised research seminar in which students complete an extensive review of the literature in their chosen area of research specialization. May be repeated for credit.

799. Dissertation (1-12)

801. Thesis Extension (1-3)

802. Dissertation Extension (1-3)

803. Research Extension (1-3)