

# Economics

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## Courses

### ***ECON 1000 Economics in Everyday Life (MOTR ECON 100): 3 semester hours***

This course is an introduction to economic concepts, analysis, and issues for non-majors. ECON 1000 does not substitute for ECON 1001 or ECON 1002. Students who have already completed ECON 1001 or ECON 1002 may not take ECON 1000 for credit.

### ***ECON 1001 Principles of Microeconomics (MOTR ECON 102): 3 semester hours***

Prerequisite: MATH 1030. Introduction to the determinants of household demand, production and cost, and market prices. Applies the principles of individual decision-making behavior to understanding goods, services and resource markets.

### ***ECON 1002 Principles of Macroeconomics (MOTR ECON 101): 3 semester hours***

Prerequisite: MATH 1030 and ECON 1001. Introduction to the determination of levels of and changes in aggregate income, output, employment and prices. Applies economic principles of choice to the formulation and achievement of public policies that affect national employment, income distribution, and economic growth.

### ***ECON 1900 Introductory Topics in Economics: 3 semester hours***

This course provides an analysis of an introductory economic topic. May be repeated for credit when topic varies.

### ***ECON 2010 The Business Firm: History, Theory, and Policy: 3 semester hours***

Prerequisites: ECON 1000 or ECON 1001 or consent of instructor. This course presents a history of the development of modern business firms and examines the evolution of the economic theory of the firm. Special attention is paid to the role that firms play in fostering social and economic development. The ultimate objective of the course will be to provide students with a deeper understanding of firms so they can make better policy decisions as firm owners, managers, lawmakers, regulators, and voters.

### ***ECON 2200 Monetary Policy in Historical Perspective: 3 semester hours***

Prerequisites: ECON 1000 or ECON 1002, or consent of instructor. This course covers what monetary policy means, how it has been formed, its intellectual foundations and its prospects for future international practice. It examines historical episodes of monetary policy to understand how the economy affects monetary policy and how monetary policy in turn can have major consequences for world affairs.

### ***ECON 2800 History of American Economic Development: 3 semester hours***

Same as HIST 2800. Prerequisites: ECON 1000 or ECON 1001 or consent of instructor. This course presents an overview of American economic history. Topics may include the native American economies, the colonial and revolutionary period, the US constitution, slavery and the civil war, the shift from an agricultural to an industrial economy, the political and economic effects of the two world wars, and the growth of government in the postwar economy. This course fulfills the American History and Government general education requirement.

### ***ECON 3001 Intermediate Microeconomics: 3 semester hours***

Prerequisite: MATH 1030 and ECON 1001. Analysis of prices in terms of equilibrium of the business firm and consumer demand in markets of varying degrees of competition.

### ***ECON 3002 Intermediate Macroeconomics: 3 semester hours***

Prerequisites: MATH 1030, ECON 1001, and ECON 1002. This course examines national income and expenditure and the forces determining the level of economic activity. Special emphasis is placed on the theory of income determination and its application to public policy.

### ***ECON 3003 Game Theory and Strategic Decision Making: 3 semester hours***

Prerequisites: ECON 1001. When the best course of action depends on the decisions made by others, strategy becomes important. Game theory provides the tools for analyzing such strategic decision making. Strategic behavior is analyzed in the context of business, logistics, biology, war, government, politics, and everyday life. A wide variety of in-class experiments are used to illustrate key concepts.

### ***ECON 3100 Economic Data and Statistics: 3 semester hours***

Prerequisite: MATH 1030, ECON 1001, and ECON 1002. This course is an introduction to economic data sources, data interpretation, and statistical inference as used in economic analysis. It emphasizes the testing of economic hypotheses and the development and estimation of economic models. Students will be introduced to statistical software used in economics.

### ***ECON 3200 Money, Banking and Monetary Theory: 3 semester hours***

Prerequisites: ECON 1001 and ECON 1002. Factors influencing bank reserves and the money supply. Ability of the Federal Reserve System and the Treasury to control these factors. Introduction to monetary theory: integration of monetary phenomena with national income theory. Analysis of current policy issues.

### ***ECON 3300 International Economic Analysis: 3 semester hours***

Prerequisite: ECON 1001. Introduction to the theories of international trade and factor movements including determinants of trade, the effects of trade on sectors and on overall economic performance, trade restrictions, and balance of payments and exchange rates. Discussion of current institutions and economic developments in the global economy.

### ***ECON 3600 Market Structure, Strategy, and Pricing: 3 semester hours***

Prerequisite: ECON 1001. A theoretical and empirical analysis of the actions of firms under alternative forms of market organization. The role of economies of scale, product differentiation, mergers, and advertising in affecting industry structure and the impact of the resulting industry structure on pricing, output, promotion, and technology decisions of firms.

### ***ECON 3610 Economics of Sports, Gaming, and Gambling: 3 semester hours***

Prerequisite: ECON 1001. This course focuses on applications of fundamental economic principles to the world of sports, gaming, and gambling. It analyzes incentives present in sports and the rise of e-sports. Legal and illegal gambling are analyzed in regard to their effect on the local economy and impact of legalized gambling on sports. In addition to professional sports, NCAA, Olympic, and sports popular around the world are explored.

### ***ECON 3900 Selected Topics in Economics: 1-3 semester hours***

Prerequisites: ECON 1001 and ECON 1002. This course focuses on the analysis of a selected economic topic. The topic selected will vary from semester to semester. This course may be repeated if the topic is different.

**ECON 4030 Managerial Economics: 3 semester hours**

Prerequisites: ECON 3001; MATH 1800 or MATH 1100 recommended. Application of microeconomic theory to decision-making process in the business firm. Topics include pricing and profit strategy, cost analysis, decision making under uncertainty, technology, innovation, and productivity growth, and the structure and organization of firms. Problem-solving and case-study approach used.

**ECON 4040 Booms and Busts in the Economy: Data and Theory: 3 semester hours**

Prerequisites: ECON 3002 and ECON 3100. This course focuses on the empirical regularities in macroeconomics commonly referred to as the business cycle. Students explore the variability and co-movements of aggregate economic variables and consider alternative theoretical explanations of these phenomena. Students may not receive credit for both ECON 4040 and ECON 5040.

**ECON 4100 Introduction to Econometrics: 4 semester hours**

Prerequisites: ECON 1001 and ECON 1002; ECON 3100 or MATH 1320 or SCMA 3300; MATH 1800 or MATH 1100. An introduction to quantitative analysis of economic behavior. The ordinary least squares technique and the assumptions underlying it are developed. Methods designed to detect and correct for the violations of these assumptions are examined. Special emphasis is given to the practical application of the procedures discussed through the use of computer exercises.

**ECON 4110 Applied Econometrics: 4 semester hours**

Prerequisites: ECON 4100 or equivalent. Concepts, techniques, & advanced applications of econometrics. Emphasis on developing a critical understanding of the appropriateness and limitations of a variety of state-of-the-art techniques used to model economic or political processes. Topics will include joint tests of hypotheses, estimation of lagged effects, models of qualitative choice, simultaneous systems, and outlier diagnostics. This course includes laboratory work in quantitative economic analysis.

**ECON 4120 Time Series Econometrics for Economics and Finance: 4 semester hours**

Prerequisites: ECON 4100. This course considers applications of econometric methods to time series data. Emphasis is placed on model specification as it applies to macroeconomic or financial data. Topics covered include stationary and non-stationary time-series, seasonality, random walks, unit roots, Dickey-Fuller tests, vector autoregression, cointegration, ARCH/GARCH models, and general-to-specific modeling (ADLs). Specific applications to macroeconomics, international economics and/or financial markets are studied.

**ECON 4130 Business and Economic Forecasting: 4 semester hours**

Prerequisites: ECON 4100 or equivalent. Alternative forecasting methodologies for economic time series will be analyzed and discussed. The focus of the course will be: (1) the development of time-series (ARIMA) models and their application to forecasting; (2) the use of standard econometric models for forecasting; and (3) evaluation and comparison of these methods and the conditions under which each is the appropriate methodology. This course includes laboratory work in quantitative economic analysis.

**ECON 4150 Mathematical Economics: 3 semester hours**

Prerequisites: MATH 1800 or MATH 1100, ECON 3001. This course uses calculus and other mathematical tools to analyze economic phenomena. In addition to exploring techniques used to solve unconstrained and constrained optimization problems, the course also examines how matrix algebra is used in economic modeling. This course allows students to mathematically analyze economic models which receive graphical treatment in lower level courses. Students may not receive credit for both ECON 4150 and ECON 5150.

**ECON 4160 Geospatial Analysis in the Social Sciences: 3 semester hours**

Prerequisites: ECON 1001, junior standing or consent of instructor. Analysis of geospatial data relating to a variety of social phenomena using geographic information systems (GIS) software. Students will learn how geospatial analysis can be integrated into research projects and presentations (e.g., creating maps to present and analyze social, political, and economic data). Students will also learn how criminal activity, economic activity, voting patterns and other social behavior are spatially correlated with demographic data. As a culminating project, students will learn how to apply GIS techniques, including but not limited to sophisticated spatial modeling of social behavior.

**ECON 4170 Fundamentals of Cost-Benefit Analysis: 3 semester hours**

Prerequisites: ECON 3001 or equivalent. The purpose of this course is to provide a systemic and rigorous way of thinking about the measurement of benefits and costs when evaluating public projects, programs or regulations. Cost-benefit analysis has wide application, including: environmental resource use, highway construction projects, safety regulations, taxation of cigarettes, and investment in higher education. Given the prevalence of cost-benefit analysis in government budgetary processes, this course will develop critical appraisal skills to evaluate the appropriateness of these analyses.

**ECON 4200 Monetary Theory and Policy: 3 semester hours**

Prerequisites: ECON 3001. This course examines how monetary policy has affected the economy in the past and how it can improve economic performance in the future. Topics may include the definition of inflation, inflation policy, inflation rate targeting, the Bretton Woods gold standard, monetary regimes with metallic standards, the effect of money on oil and gold prices, the Phillips curve and its use in monetary and macroeconomics, and the origin of central banks and bank insurance policy. Students may not receive credit for both ECON 4200 and ECON 5200.

**ECON 4400 Labor Economics: Theory and Public Policy: 3 semester hours**

Prerequisites: ECON 3001 and ECON 4100. This course examines labor supply, labor demand, and market determination of wages. Topics covered include policy analysis, poverty and inequality, and labor market discrimination. This course draws upon the tools from intermediate microeconomics and econometrics. Students may not receive credit for both ECON 4400 and ECON 5400.

**ECON 4550 Natural Resource Economics: 3 semester hours**

Prerequisites: ECON 1001 or consent of instructor; junior standing. The relationship between human activity and the world's natural resources requires choices. This course uses an economics perspective to study these choices. This perspective uses the view of the environment as an asset for its starting point. Issues concerning the optimal and sustainable use of natural resources are examined in this context. Special emphasis is given to potential policy responses to environmental problems.

**ECON 4900 Advanced Topics in Economic Analysis: 1-4 semester hours**

Prerequisites: Consent of instructor. This course is the advanced study of a specific topic in Economics. Topics may vary from semester to semester. It may be taken for credit more than once if the topics are different.

**ECON 4980 Special Readings: 1-6 semester hours**

Prerequisite: Consent of instructor; grade point of 3.0 or higher in Economics. Unscheduled, independent directed readings on topics mutually acceptable to student and instructor. Maximum credit limited to six hours.

**ECON 4990 Internship in Applied Economics: 1-6 semester hours**

Prerequisites: ECON 3001, junior standing and consent of instructor. This course is an independent study involving work with an appropriate private firm or public agency. A maximum of six hours may be earned, only three of which may be applied to the Economics major.

**ECON 4995 Internship in Actuarial Science: 1-3 semester hours**

Same as MATH 4995. Prerequisites: Junior standing and consent of program director. Supervised off-campus training in a private or public sector position in which the student applies the knowledge and skills learned in their actuarial science coursework. The internship is monitored by a faculty member and the student must provide a written report at the end of the project. This course may be repeated for a maximum of 6 credit hours.

**ECON 5001 Microeconomic Analysis: 3 semester hours**

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4150. Survey of Microeconomic comparative statistics. Detailed examination of demand and supply, product and factor markets. Partial equilibrium in competitive, imperfectly competitive and monopolistic markets.

**ECON 5002 Macroeconomic Analysis: 3 semester hours**

Prerequisites: ECON 3200; ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; and ECON 4150. Aggregate economic theory, including analysis of the determinants of income, output, employment, and prices. Employment and price-level effects of consumer and investment demand, the money supply and interest rates, and government policies.

**ECON 5040 Business Cycles - Data and Theory: 3 semester hours**

Prerequisites: ECON 3002 and ECON 3100. This course examines business cycles. Students explore the variability and co-movements of aggregate economic variables using graphical and statistical methods and consider alternative theoretical explanations of these phenomena. Students may not receive credit for both ECON 4040 and ECON 5040.

**ECON 5052 Economics for Educators: 3 semester hours**

Prerequisites: Graduate standing. This course covers markets and the economy. There will be special reference to the costs and benefits approach to personal decision-making. This course may not be used by Economics students to meet M.A. degree requirements.

**ECON 5053 Personal Finance for Educators: 3 semester hours**

Prerequisites: ECON 5052. This course covers personal finance decision-making. Topics include income, taxes, credit, debt, saving, investment, risk, and insurance. This course may not be used by Economics students to meet M.A. degree requirements.

**ECON 5100 Econometric Theory and Methods: 3 semester hours**

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4100; ECON 4150 or equivalent. A rigorous review of statistical models and methods relevant to the estimation and testing of economic relationships. Emphasis on the theoretical underpinnings of techniques commonly used for multivariate regression analysis and hypothesis testing. Topics include ordinary least squares, generalized least squares, and instrumental variables estimation.

**ECON 5110 Topics in Applied Econometrics: 3 semester hours**

Prerequisites: ECON 4100, or ECON 5100 or SCMA 5300. Concepts and application of advanced econometric techniques. Students will develop a thorough understanding of the appropriateness and application of a variety of state-of-the art techniques. Topics will include specification tests, polynomial distributed lags, discrete choice, pooled time-series cross-section, simultaneous equations and outlier detection.

**ECON 5120 Advanced Topics in Time Series Econometrics: 3 semester hours**

Prerequisites: ECON 4100 or equivalent and a solid foundation in statistics. Application of econometric methods to time-series data. Emphasis on model specification as it applies to macroeconomic or financial data. Advanced topics include: Stationary and nonstationary time-series, seasonality, random walks, unit roots, Dickey-Fuller tests, cointegration, ARCH/GARCH models, and general to specific modeling (ADLs). Specific applications to macro-economics, international economics and/or financial markets.

**ECON 5130 Advanced Topics in Business and Economic Forecasting: 3 semester hours**

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4150; ECON 4100 or SCMA 5300. This course develops the alternative techniques which are used to forecast economic time series. Each forecasting technique will be evaluated in terms of its theoretical soundness and predictive track record. Students will also learn to use these techniques to differentiate among competing economic models.

**ECON 5150 Mathematical Methods for Economics: 3 semester hours**

Prerequisites: MATH 1100 or MATH 1800, ECON 3001. This course presents the mathematics used in economics at an advanced level. Subjects covered include multivariate calculus, linear algebra, comparative statics, and unconstrained and constrained optimization. Emphasis is placed on the interpretation of mathematical results in economic terms. Students may not receive credit for both ECON 4150 and ECON 5150. This course may not be used by Economics students to meet M.A. degree requirements.

**ECON 5200 Advanced Monetary Theory and Policy: 3 semester hours**

Prerequisites: ECON 3001. This course examines how monetary policy has affected the economy in the past and how it can improve economic performance in the future. Topics may include the definition of inflation, inflation policy, inflation rate targeting, the Bretton Woods gold standard, monetary regimes with metallic standards, the effect of money on oil and gold prices, the Phillips curve and its use in monetary and macroeconomics, and the origin of central banks and bank insurance policy. Students may not receive credit for both ECON 4200 and ECON 5200.

***ECON 5400 Advanced Topics in Labor Economics: 3 semester hours***

Prerequisites: ECON 3001 or BUS AD 5001, ECON 4100. This course examines labor supply, labor demand, and market determination of wages. Topics covered may include policy analysis, poverty and inequality, and labor market discrimination. Throughout the course, current public policy debates are examined using the theoretical models developed. The course also emphasizes research methods and data measurement issues. Students may not receive credit for both ECON 4400 and ECON 5400.

***ECON 5550 Economics for Public Policy Analysis: 3 semester hours***

Prerequisite: Graduate standing. This course focuses on the role of the government in the economy, with particular attention paid to the way government affects the allocation of resources and the distribution of income. This course covers microeconomic principles and key economic concepts used in public policy analysis. Practical application of theoretical concepts is emphasized. This course may not be used by Economics students to meet M.A. degree requirements.

***ECON 5820 Monetary Economics and Banking: 3 semester hours***

Prerequisites: Graduate standing and admission to a PMiAE Emphasis Area. This course covers factors influencing bank reserves, money supply creation and the ability of the Federal Reserve System and the Treasury to control the money supply. It provides an introduction to monetary theory and integrates monetary phenomena with national income theory. The course also applies the principles of monetary economics to current policy issues. Students may not receive credit for both ECON 3200 and ECON 5820.

***ECON 5845 Strategic Decision Making and Game Theory: 3 semester hours***

Prerequisites: Graduate standing and admission to PMiAE Emphasis Area. This course examines the use of game theory as a tool for analyzing and strategic decision making. Strategic behavior is investigated in the context of business, government policy, politics, and everyday life. A wide variety of in-class experiments are used to illustrate key concepts. Students may not receive credit for both ECON 3003 and ECON 5845.

***ECON 5900 Advanced Topics in Economic Analysis: 3 semester hours***

Prerequisite: Consent of the instructor. Study of a specific economics topic, which may vary from semester to semester. May be taken more than once if the topic is different.

***ECON 5980 Directed Readings: 1-6 semester hours***

Prerequisite: Consent of the instructor. Independent study through readings, reports, research projects, and conferences.