ECONOMICS (ECO)

ECO 100 Economics of a Global Sustainable Society 3
Sustainable development, with a natural emphasis on non-Western nations; will consider issues around such topics as demographics, development theories, the environment, health and education, the role of institutions, etc.
GE Core: GSB
GE Marker: GN

ECO 101 Introduction to Economics 3
Introduction to basic economic concepts and public policy issues with application to the contemporary American economy.
GE Core: GSB
Notes: Students with credit for ECO 201, ECO 202 or equivalent, cannot also receive credit for ECO 101.

ECO 201 Principles of Microeconomics 3
Introduction to microeconomic principles and analysis. Topics include: the market economy, supply and demand, shortages and surpluses, competition and monopoly, international trade, and public policy issues.
GE Core: GSB

ECO 201R Principles of Microeconomics Recitation 0
Recitation supplements and expands upon the content of the co-requisite course: ECO 201: Principles of Microeconomics.

ECO 202 Principles of Macroeconomics 3
Introduction to macroeconomic principles and analysis. Topics include: the national income, the monetary system, inflation, business cycles, fiscal policy, the national debt, exchange rates, balance of payments, and economic growth.
GE Core: GSB
Prerequisites: ECO 101 or ECO 201.

ECO 211 Prin of Economics I 3
ECO 219 Essential Mathematics for Economics 3
Pre-calculus mathematical applications in economics. Provides mathematical tools for upper-level courses in economics.
Prerequisites: At least one year of high school algebra.

ECO 250 Economic and Business Statistics I 3
Introduction to statistical methods with applications in economics and business. Topics include descriptive statistics, probability, statistical inference, correlation, and regression. Emphasis on problem solving with microcomputer applications.
Prerequisites: An acceptable score on the mathematics placement test or any one of the following: MAT 115, MAT 120, MAT 150, MAT 151, MAT 190, MAT 191, MAT 292, ECO 219.

ECO 250R Econ/Bus Stats I Recitation 0
ECO 300 The International Economy 3
Examines the history, structure, and institutional foundations of the international trading system. Analyzes the impact of trade on economic growth, employment and living standards with a focus on contemporary issues.
GE Marker: GL
Prerequisites: ECO 101 or ECO 201, and ECO 202. or permission of instructor.

ECO 301 Intermediate Microeconomic Theory 3
Intermediate level analysis of consumer theory and theory of the firm. Other topics include market failure, savings and investment, risk and uncertainty, wage determination, and income distribution.
Prerequisites: ECO 101 or ECO 201. MAT 120 or MAT 191 or ECO 219.

ECO 302 Intermediate Macroeconomic Theory 3
Intermediate level analysis of national income and employment with attention to fiscal and monetary policy, theories of business fluctuations, and economic growth.
Prerequisites: ECO 202.

ECO 310 The U.S. in the Global Economy 3
Examination of the history of the United States in the international economy. Examines trade policy, technological and industrial leadership, immigration, the depression, and American post-WWII dominance.
Prerequisites: ECO 101 or ECO 201, and ECO 202. or permission of instructor.

ECO 311 Managerial Economics 3
Economic analysis of management and firm behavior. Topics include: the nature of the firm, managerial decision-making, demand, market structures, competitive strategies, finance, costs, supply, pricing, RD, and mergers.
Prerequisites: ECO 250.

ECO 312 Economics of Technology 3
Economic analysis of technological change. Topics include sources of productivity, inventive activity, entrepreneurship, innovation strategy, RD management, patenting, and technology assessment.
Prerequisites: ECO 101 or ECO 201.
Notes: Same as ENT 312.

ECO 315 The Economics of Entrepreneurship 3
Study of entrepreneurship from history of economic thought perspective and application of such concepts to economic agents. Emphasis on economic thought, market activity, and economic growth.
Prerequisites: ECO 101 or ECO 201.
Notes: Same as ENT 315.

ECO 319 Quantitative Analysis 3
Introduction to mathematical methods in economics. Includes applications of mathematics to consumer and production theory, equilibrium analysis, input-output models, and optimization.
Prerequisites: Minimum grade of B (3.0) in MAT 120 or minimum grade of C (2.0) in MAT 191 or minimum grade of B (3.0) in ECO 219. ECO 201.

ECO 325 Sports Economics 3
Economic theory of sports leagues: competitive balance, player labor markets, and owner capital markets. Theories of league expansion, rival leagues, franchise relocation, and sports venues.
Prerequisites: ECO 101 or ECO 201.

ECO 327 Money and Economic Activity 3
Emphasis on legal, institutional, and economic forces which mutually interact to determine supply of money. Elementary monetary theory and monetary flows, institutions, policies, and problems analyzed. International as well as domestic monetary analysis.
Prerequisites: ECO 202.

ECO 350 Economic and Business Statistics II 3
Continuation of ECO 250. Multiple regression, time series analysis, simple forecasting, basic econometric models applied to case studies in business, economics, and finance. Use of statistical programs.
Prerequisites: ECO 250.

ECO 365 The Economics of European Integration 3
Examines the historical, current and expected future economics of the European Union. Topics include: trade, protectionism, harmonization, labor issues, the Euro, expansion and interrelation with the global economy.
Prerequisites: ECO 201 and ECO 202.
ECO 375 Government and Business 3
Government regulation and control of markets. Emphasis on antitrust laws and economics as well as control by regulation.
Prerequisites: ECO 101 or ECO 201.

ECO 380 Environmental and Natural Resource Economics 3
Examination of environmental problems in market economies. Topics include the economic theory of pollution and its control, common-property resources, renewable and other resources, endangered species, population growth, and international problems.
Prerequisites: ECO 101 or ECO 201.

ECO 385 Introduction to Industrial Organization 3
The behavior of firms in imperfectly competitive markets, the acquisition and use of market power by firms, strategic interactions among firms, and the role of government in addressing market failures.
Prerequisites: ECO 201.

ECO 419 Quantitative Analysis I 3

ECO 423 Public Economics Seminar 3
The analysis of taxes and expenditures. Topics include: rationale for government (public goods, externalities), expenditure analysis (including income redistribution), tax analysis (including income, sales, and property taxes).
Prerequisites: ECO 301.

ECO 426 Internship: Experiential Learning in Economics 1-3
Campus-monitored, supervised off-campus internships that involve the application of economic analysis and methods and develop professional skills. Minimum of fifty supervised internship hours per one credit hour earned.
Prerequisites: Minimum overall GPA of 2.50 and permission of instructor.
ECON major;
Notes: May be repeated for a total of 6 s.h.

ECO 460 International Monetary Economics Seminar 3
Analysis of balance of payments and international monetary systems. Monetary and fiscal policies under the gold standard, fixed exchange, and flexible exchange systems. Breakdown of the Bretton Woods system and the current exchange rate policies of central banks.
Prerequisites: ECO 302.

ECO 467 Economic Growth and Development Seminar 3
Investigation of the determinants of the long-run economic growth of nations. Application of economic concepts to problems of developing and lesser developed countries.
Prerequisites: ECO 302.

ECO 470 Labor Economics Seminar 3
Examination of wage and employment determination in U.S. labor markets. Topics include labor supply and labor demand theory, investments in education and training, job search and migration, unemployment, unions, racial and sex discrimination, income inequality, and public policy.
Prerequisites: ECO 301.

ECO 490 Health Economics Seminar 3
Examination of supply and demand for health care, medical malpractice, health insurance, government provision of health care, international comparisons, and health care reform.
Prerequisites: ECO 301.

ECO 493 Honors Work 3-6
Honors Work.

ECO 499 Problems in Economics 3
Independent study, research, and discussion covering a topic or group of related topics of current interest in economic policy or economic theory. Topics covered vary from semester to semester.
Prerequisites: Permission of instructor.
Notes: May be repeated for credit with approval of department head.

ECO 513 Directed Studies in Economics I 1-3
Individual study of economic problems of special interest to the student. Regular conferences with instructor required.
Prerequisites: 21 s.h. of economics and permission of instructor.

ECO 518 American Economic History 3
Evolution of the American economy with emphasis on economic performance through time measured against goals of full employment, price stability, and rapid growth.
Prerequisites: ECO 201.
Notes: Same as HIS 518.

ECO 601 Macroeconomics 3
Economics (ECO)

ECO 613 Directed Studies in Economics II 1-3
Independent study, research, and discussion covering a topic or group of related topics of current interest in economic policy or economic theory. Topics covered vary from semester to semester.
Prerequisites: Permission of instructor.
Notes: May be repeated for credit with approval of department head.

ECO 619 Mathematical Economics 3
Reviews statistics and probability, matrix algebra and optimization and introduces theory and applications in integral calculus and differential equations.
Prerequisites: ECO 301, ECO 319 or equivalent.

ECO 641 Microeconomics 3
Theory of consumer and firm behavior under certainty and uncertainty including exchange, production, income distribution, market structure and welfare economics.
Prerequisites: ECO 301, ECO 619, or permission of instructor.

ECO 642 Microeconomics II 3
Examination of market failures that can occur within competitive, decentralized market systems. Topics include market power, uncertainty, asymmetric information, externalities, and public goods.
Prerequisites: ECO 641 or permission of instructor.

ECO 643 Econometric Methods 3
Introduction to advanced econometric applications. Topics may include seemingly unrelated regressions, simultaneous equations, identification, two-stage least squares, and sample selection models. Application to economic data using statistical software emphasized.

ECO 644 Econometric Theory 3
Foundations of mathematical statistics and linear econometric models. Topics include discrete and continuous probability distributions, random sampling and asymptotic analysis, the linear regression model, hypothesis testing, and statistical programming and simulation using SAS or other statistical software.
ECO 646 Macroeconomics 3
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.
**Prerequisites:** ECO 619, ECO 641, or permission of instructor.

ECO 652 Advanced Economic and Business Statistics 1.5-3
Topics will include regression analysis, analysis of variance, and nonparametric tests. SAS is employed.

ECO 663 Predictive Data Mining 3
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.
**Prerequisites:** ECO 643 and ECO 644, or permission of instructor.

ECO 664 Time Series and Forecasting 3
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.
**Prerequisites:** ECO 643, ECO 644, or permission of instructor.

ECO 691 Economics Internship 1-3
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.
**Prerequisites:** Permission of the Director of Graduate Study.
**Notes:** May be repeated. Maximum of 3 credit hours may apply toward MA degree; this course cannot be applied toward the PhD degree.

ECO 711 Experimental Course 3
This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

ECO 712 Directed Studies in Economics III 1-3
Individual study of an advanced topic in economics. Regular conferences with the instructor are required.
**Prerequisites:** Permission of Director of Graduate Study.
**Notes:** May be repeated for credit.

ECO 721 Empirical Microeconomics 3
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.
**Prerequisites:** ECO 641, ECO 643, ECO 644, or permission of instructor.
**Notes:** May be repeated for credit.

ECO 725 Data Methods in Economics 3
Advanced techniques in data preparation; topics include data formats, error checking, merging data, large data sets, and missing observations. Students work extensively with SAS.

ECO 731 Applied Policy Methods 3
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. Prerequisite/Corequisite: ECO 641 or permission of instructor.

ECO 734 Public Policies Toward Innovation and Sustainability 3
Examines public-sector innovation and sustainability policies from a domestic and global perspective.
**Prerequisites:** ECO 731 or permission of instructor.

ECO 735 Labor Economics 3
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.
**Prerequisites:** ECO 641 and ECO 642, or permission of instructor.
**Notes:** May be repeated for credit.

ECO 736 Public Economics 3
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.
**Prerequisites:** ECO 641 and ECO 642, or permission of instructor.
**Notes:** May be repeated for credit.

ECO 737 Health Economics 3
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.
**Prerequisites:** ECO 641 and ECO 642, or permission of instructor.
**Notes:** May be repeated for credit.

ECO 738 Topics in Economics 3
Application of economic theory and econometrics to a specific topic in public, labor, or health.
**Prerequisites:** ECO 641 and ECO 643 or permission of instructor.
**Notes:** May be repeated for credit.

ECO 739 Independent Field Course 1-4
A faculty-directed, independent study of a research area that is particularly related to a student's primary field of interest.
**Prerequisites:** ECO 641, ECO 642, and permission of Director of Graduate Study.
**Notes:** May be repeated for credit. May serve as one required major field course.

ECO 741 Advanced Mathematical Economics 3
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.
**Prerequisites:** ECO 619, ECO 641, or permission of instructor.

ECO 742 Advanced Microeconomic Theory 3
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.
**Prerequisites/Corequisite:** ECO 741 or permission of instructor.

ECO 745 Advanced Econometric Theory 3
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.
**Prerequisites:** Pr. or Coreq.: ECO 741 or permission of instructor.

ECO 746 Advanced Econometric Theory II 3
Advanced methods in microeconomic analysis, covers linear models for panel data with unobserved heterogeneity, M-estimators, maximum likelihood, generalized methods of moments, and discrete response models. Includes lab.
**Prerequisites:** ECO 745 or permission of instructor.
ECO 754 Applied Theory I: Game Theory 2
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.
Prerequisites: ECO 742 or permission of instructor.

ECO 755 Applied Theory II: Economics of Information 2
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.
Prerequisites: ECO 742 or permission of instructor.

ECO 797 Seminar in Empirical Economics 3-6
A supervised seminar in which students formulate a major empirical research project and identify, collect, and assemble the data required to pursue that research.
Prerequisites: Permission of Director of Graduate Study.
Notes: May be repeated for credit.

ECO 798 Seminar in Economic Research 3-6
A supervised research seminar in which students complete an extensive review of the literature in their chosen area of research specialization.
Prerequisites: Permission of Director of Graduate Study.
Notes: May be repeated for credit.

ECO 799 Dissertation 1-12
ECO 802 Dissertation Extension 1-3
Dissertation Extension.

ECO 803 Research Extension 1-3
Research Extension.