# **ECONOMICS (ECO)**

# ECO 211. Principles of Microeconomics. 3 Credit Hours.

Fundamental course devoted to the development and application of basic analytical tools and principles required for an understanding of major economic problems and policy alternatives available for their solution. A particular emphasis is devoted to microeconomic analysis. Topics include the study of markets under varying conditions of competition, including market deficiencies such as pollution, prices, and resource allocation distribution of income, including poverty problems, the economics of the firm and the government, and international economic relations. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

## ECO 212. Principles of Macroeconomics. 3 Credit Hours.

Fundamental course devoted to macroeconomic analysis. Topics include national income and employment analysis, money and banking, economic growth, and comparison of different economic systems, including the problems of developing the less developed world. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

#### ECO 213. Principles of Economics. 4 Credit Hours.

This course introduces the study of the economic behavior of individuals, firms, and markets; as well as the analysis of the economy as a whole, both in terms of short-run fluctuations (the business cycle) and long-run determinants of economic growth.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

#### ECO 300. Microeconomic Theory and Applications. 3 Credit Hours.

Intermediate level analysis of the role of price in resource allocation in markets of varying degrees of competition. It focuses on the process of decision-making by individuals and firms, and the welfare consequences. Special attention is devoted to economic applications. Prerequisite: ECO 211 or ECO 213 and MAS 110, or MTH 130 or MTH 141 or higher.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

# ECO 301. Macroeconomic Theory. 3 Credit Hours.

Intermediate level analysis of the measurement, determination, and control of aggregate economic activity.

Prerequisite: ECO 212, MAS 110, or MTH 130 or MTH 141 or higher.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

# ECO 302. Microeconomic Theory. 3 Credit Hours.

Intermediate level analysis of the role of price in resource allocation in markets of varying degrees of competition, as well as in the determination of wages, rent, interest, profits, and public policy.

Prerequisite: ECO 211 or ECO 213 and MTH 141 or higher.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

#### ECO 303. Macroeconomic Theory. 3 Credit Hours.

Intermediate level analysis of the measurement, determination, and control of aggregate economic activity.

Prerequisite: ECO 212 or ECO 213 and MAS 110 or MTH 130 or MTH 141 or Higher.

Components: LEC. Grading: GRD. Typically Offered: Fall & Spring.

## ECO 307. Public Economics. 3 Credit Hours.

This course studies the role of governments in the economy by surveying several topics in public finance and public policy; it is designed to be a link between the theory and several policy-relevant applications. Students will acquire the microeconomic tools and techniques to identify, analyze, and solve public policy and political economy problems. Students will also learn to apply the theory to current events such as the policy debates over social security, health care, education, and tax reform. Selected topics: budget analysis and scoring; correction of externalities and provision of public goods; public choice theory and government failure; fiscal federalism and redistribution; role of government in education, social security, and health care; income distribution and welfare programs; optimal taxation and tax inefficiencies; taxes on labor supply, savings, capital gains, and business income; fundamental tax reform and consumption taxation. This is an elective class addressed to economics majors, minors, and any student with an interest in the topics.

Prerequisite: ECO 213 or ECO 211 and ECO 212. Components: LEC. Grading: GRD.

Typically Offered: Fall & Spring.

#### ECO 311. Labor Economics (I). 3 Credit Hours.

Course surveys the structure and functioning of labor markets. Topics include determinants of labor supply and labor demand, economics of wage differentials, economic impact of labor unions, discrimination in labor markets, and the labor market effects of various government policies such as payroll and income taxes, educational subsidies, and minimum wage laws. The central goal of the course is to provide the student with a framework for analyzing diverse issues related to the labor sector of the economy.

Prerequisite: ECO 300. Or ECO 302. Components: LEC. Grading: GRD.

Typically Offered: Fall.

#### ECO 333. Industrial Economics and Public Policy. 3 Credit Hours.

This course surveys several topics in industrial economics, regulation, and antitrust; it is designed to be a link between the theory and several applications. Students will acquire the microeconomic tools and techniques to identify, analyze, and solve industrial economics and government competition policy problems, and will learn to apply the theory to many real-world markets and current economic events. Selected topics: price discrimination; product differentiation; advertising; network effects; consumer search and digital markets; auctions; bargaining; vertical restraints and mergers; collusion and cartels; innovation and intellectual property; natural monopolies and regulation; and antitrust policies. This is an elective class addressed to economics majors, minors, and any student with an interest in the topics.

Requisite: ECO 300 OR ECO 302.

Components: LEC. Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 345. Environmental Economics. 3 Credit Hours.

This course determines the appropriate way to regulate economic activity so as to achieve an optimal balance between competing environmental and economic goals. Economic reasoning is used to evaluate causes and consequences of environmental problems. The course rigorously evaluates various types of environmental regulation, including "cap-and-trade," command and control mandates, and pollution taxes. Other specific topics include public goods, externalities, cost benefit analysis, non-market valuation, and international trade and development and the environment. Prerequisite: ECO 211 or ECO 213.

Components: LEC. Grading: GRD. Typically Offered: Spring & Summer.

# ECO 351. Economics of Development. 3 Credit Hours.

This course studies factors underlying economic development, measures of and goals for development, principles applicable to problems of development, the role of markets and planning in development, social, cultural, and political factors affecting economic development, and comparative rates of progress in different countries.

Prerequisite: ECO 213 or ECO 211 and ECO 212. Components: LEC. Grading: GRD. Typically Offered: Spring & Summer.

#### ECO 371. Latin America, the Caribbean, and the Global Economy. 3 Credit Hours.

An analysis of the historical and projected economic growth of major Latin American and Caribbean countries, with emphasis on the post World War II period. This course analyzes industrialization, foreign investment, international trade and regional integration, monetary and fiscal policies, exchange rates, financial stability, corruption, and development strategies and planning within the context of Latin America and the Caribbean. Prerequisite: ECO 213 or ECO 211 and ECO 212.

Components: LEC. Grading: GRD. Typically Offered: Fall & Spring.

#### ECO 379. The Political Economy of Growth. 3 Credit Hours.

This course studies the causes of economic growth such as geography, culture, institutions, human and physical capital, as well as technology. It examines the role they play in the development process, casting light in their order of importance for growth and into which growth determinants are amenable to policy change.

Prerequisite: ECO 213 or ECO 211 and ECO 212. Components: LEC. Grading: GRD. Typically Offered: Fall.

# ECO 386. Health Economics. 3 Credit Hours.

The course applies the tools of microeconomic analysis to the health care sector. It examines how models of demand and supply apply to the health care sector in general, and in particular to the health insurance, the hospital, the physicians, and the pharmaceutical sectors. By examining the actors and issues in this market, students are able to discuss policy issues from an economic perspective. Prerequisite: ECO 300. Or ECO 302.

Components: LEC. Grading: GRD. Typically Offered: Fall & Spring.

# ECO 403. Monetary Economics. 3 Credit Hours.

Analysis of the role of money in economic affairs. Topics include the determinants of the money supply and interest rates, money and prices, money and stability, and growth. Emphasis is placed on current problems and policies.

Prerequisite: ECO 301 or ECO 303. Components: LEC. Grading: GRD. Typically Offered: Spring.

#### ECO 420. Economic Growth. 3 Credit Hours.

Course covers selected topics in economic growth. Topics include stylized facts associated with economic growth, the theoretical study of economic growth, and empirical tests of those theories. Course work is supplemented by case studies of individual countries, particularly developing countries. Prerequisite: ECO 301 or ECO 303.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

# ECO 430. Applied Econometrics. 3 Credit Hours.

This course introduces basic econometric techniques for analyzing economic data. The goal is to make students sophisticated consumers and skilled producers of empirical analysis, which will be attained by extensive work on a variety of real-world data like students' test scores, CEO wages, mortgage applications, cigarette demand, stock market capitalization, inflation, GDP and interest rates. Learning how to use econometric analysis software is an integral part of the course.

Prerequisite: ECO 211 or ECO 213 and MAS 110, or MTH 130 or MTH 141 or higher.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

#### ECO 441. International Trade Theory. 3 Credit Hours.

Study of the principles of comparative advantage and the gains from international trade. Analysis of tariffs, quotas, and protectionism is included. Prerequisite: ECO 300. Or ECO 302.

Components: LEC. Grading: GRD. Typically Offered: Fall.

# ECO 442. International Monetary Economics. 3 Credit Hours.

Analysis of models of the exchange rate, the balance of payments, and monetary policy in an open economy. Prerequisite: ECO 213 or ECO 211 and ECO 212. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

# ECO 443. Economic Analysis of Energy and Commodity Markets. 3 Credit Hours.

This course explores the principles of energy economics, commodity markets and advanced macroeconomics. It discusses the main trends in energy production and consumption, the methods of analysis in energy and commodity markets, and the main challenges in the energy sector. The analysis of oil prices and the economics of oil exporting countries is emphasized.

Prerequisite: ECO 213 or ECO 211 and ECO 212.

Components: LEC. Grading: GRD. Typically Offered: Fall.

# ECO 444. Game Theory in Economic Applications.. 3 Credit Hours.

This course is an introduction to the techniques and questions of modern microeconomics. The course will expose you to the techniques of game theory, the workhorse of modern microeconomics, and will apply those techniques to the analysis of a variety of economics situations and institutions.

Prerequisite: MAS110 or MTH 130 or MTH 141 or higher. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

#### ECO 445. Global Economics: Trade and Currencies. 3 Credit Hours.

In this course, students are exposed to two fundamental topics which are primordial to the understanding of any economic, political and/or social circumstance in any given country at any given time: (1) The evolution and meaning of the business cycle and capitalism, and (2) The effect of international trade and currencies. These two themes have sparked debates for centuries as they have great implications in the development of countries. Also, this course challenges students' critical thinking and analytical skills with a wide range of controversial readings on these two topics. This course is divided into four sections. The first one introduces students to the idea of the business cycle. The second section aims at explaining how capitalism was born and how it has evolved in the 19th and 20th centuries. Then, the course centers on explaining capitalism today and presents criticisms. And finally, students analyze how the business cycle and capitalism has unfolded and affected certain countries in Latin America. Prerequisite: ECO 301 or ECO 303.

Components: LEC. Grading: GRD.

Typically Offered: Fall & Spring.

#### ECO 460. Industrial Organization. 3 Credit Hours.

This course shows how microeconomic theory can be used to understand the diverse practices encountered in real-world markets between the extreme cases of perfect competition and monopoly. Topics to be covered include strategic pricing behavior, collusion, advertising and information, vertical integration, vertical restraints, regulation and a review of empirical literature.

Prerequisite: ECO 302. Components: LEC. Grading: GRD. Typically Offered: Offered by Announcement Only.

#### ECO 496. Directed Studies in Economics. 1-3 Credit Hours.

Supervised readings, individual research project, or independent investigation of selected non-STEM related problems in the discipline. Offered only by special arrangement with supervising faculty member, who approves topic and evaluation process at time of registration. **Components:** THI.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 497. Directed Studies in Economics. 1-3 Credit Hours.

Supervised readings, individual research project or independent investigation of selected STEM-related problems in the discipline. Offered only by special arrangement with supervising faculty member, who approves topic and evaluation process at time of registration.

Components: THI. Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 498. Special Topics in Economics. 3 Credit Hours.

Special topics in selected non-STEM areas of Economics. Prerequisite: ECO 300. Or ECO 302. **Components:** LEC. **Grading:** GRD. **Typically Offered:** Offered by Announcement Only.

# ECO 499. Special Topics in Economics. 3 Credit Hours.

Special topics in selected STEM areas of Economics. Prerequisite: ECO 302. Components: LEC. Grading: GRD. Typically Offered: Spring.

# ECO 510. Mathematical Economics and Applications. 3 Credit Hours.

The course will focus on specific applications of microeconomic theory, which may vary each semester. Topics may include choice under uncertainty, game-theoretic models of insurance markets, principal-agents problems, and basic auction theory. The discussion of each application will be preceded by a discussion of the mathematical tools required. The mathematics topics covered may include basic theory of sets and functions, concave / convex functions and their role in optimization, expectations, conditional probability, Bayes rule, and order statistics.

Prerequisite: ECO 211 or ECO 213 and MAS 110, or MTH 130 or MTH 141 or higher.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

## ECO 511. Empirical Labor Economics. 3 Credit Hours.

A theoretical and empirical analysis of how labor markets operate. A survey of the literature, problems, and methodology of modern labor economics. Human capital analysis, the wage structure, job search and job-matching models, time-allocation models, the economic impact of labor unions, labor market discrimination, the determinants of labor demand and supply, and the factors affecting government policy relating to the labor sector is also included.

ECO 430.

Components: LEC. Grading: GRD. Typically Offered: Offered by Announcement Only.

# ECO 512. Topics in Mathematical Economics. 3 Credit Hours.

This course shows how modern economic techniques can be used to identify optimal managerial decisions and industrial developments. Diverse realworld economic applications are examined.

Prerequisite: ECO 211 or ECO 213 and MAS 110, or MTH 130 or MTH 141 or higher.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

#### ECO 520. Advanced Econometrics. 3 Credit Hours.

Statistical methods of estimating and testing mathematical model of economic relationships.

Prerequisite: ECO 211 or ECO 213 and MAS 110, or MTH 130 or MTH 141 or higher.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

#### ECO 521. Advanced Macroeconomic Theory. 3 Credit Hours.

The primary objective of this course is to introduce the student to the mathematical presentation of the major Classical, Neo-classical, Keynesian, and Neo-Keynesian macroeconomic models.

Prerequisite: ECO 301 or ECO 303. Components: LEC. Grading: GRD. Typically Offered: Fall.

#### ECO 532. History of Economic Thought. 3 Credit Hours.

Historical development of economic doctrines and theory. Topics and individuals discussed include mercantilism, physiocracy, Adam Smith, Thomas Malthus, David Ricardo, J. S. Mill, Karl Marx, marginal analysis, Alfred Marshall, and J. M. Keynes. Special emphasis is placed on the effect of historical insights upon the contemporary core of economic theory.

Prerequisite: ECO 213 or ECO 211 and ECO 212. Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 533. Advanced Microeconomic Theory. 3 Credit Hours.

An introduction to the mathematical approach to microeconomic theory. Topics include consumer/household behavior, the theory of the firm, resource allocation, welfare economics, and uncertainty theory.

Prerequisite: ECO 302. Components: LEC. Grading: GRD. Typically Offered: Fall.

#### ECO 555. Economics Departmental Honors Research Project. 3 Credit Hours.

Research project to fulfill requirements for Departmental Honors in Economics. Components: THI. Grading: SUS. Typically Offered: Offered by Announcement Only.

#### ECO 600. Empirical Methods in Economics I. 3 Credit Hours.

An introduction to the empirical analysis of economic data and models. Topics include probability and measure theory, large sample theory and limit theory, and regression models.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

# ECO 601. Dynamic Systems in Economics. 3 Credit Hours.

An introduction to the analysis of dynamic models in economics. Topics include differential and difference equations, dynamic optimization, recursive methods and dynamics programming, and computational methods.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

# ECO 602. Game and Information Theory. 3 Credit Hours.

An introduction to the analysis of uncertainty, information, and strategic behavior. Topics include decisions under uncertainty, noncooperative games, and agency problems.

Components: LEC. Grading: GRD. Typically Offered: Fall.

#### ECO 603. Advanced Dynamic Theory & Applications I. 3 Credit Hours.

Selected topics in advanced dynamic theory. Topics may include: monetary theory & policy, asset pricing, dynamic public finance, and open economy macroeconomics.

Components: LEC. Grading: GRD. Typically Offered: Fall.

## ECO 604. Advanced Dynamic Theory & Applications II. 3 Credit Hours.

Selected topics in advanced dynamic theory. Topics may include: monetary theory & policy, asset pricing, dynamic public finance, and open economy macroeconomics.

Components: LEC. Grading: GRD. Typically Offered: Spring.

# ECO 610. Mathematical Economics and Applications. 2-3 Credit Hours.

The course will focus on specific applications of microeconomic theory, which may vary each semester. Topics may include choice under uncertainty, game-theoretic models of insurance markets, principal-agents problems, and basic auction theory. The discussion of each application will be preceded by a discussion of the mathematical tools required. The mathematics topics covered may include basic theory of sets and functions, concave / convex functions and their role in optimization, expectations, conditional probability, Bayes rule, and order statistics.

Components: LEC. Grading: GRD. Typically Offered: Fall.

# ECO 611. Labor Economics (III). 3 Credit Hours.

The formulation and testing of models of labor markets. The application of the tools of microeconomics and econometrics to the analysis of labor markets. Leading contributions in the areas of dynamic analysis of labor markets, human capital investment, the determinants of the wage structure, time allocation and search models, dual and internal labor market models, and analysis of government policy are discussed. **Components:** LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 612. Topics in Economic Theory & Applications I. 3 Credit Hours.

Selected topics and applications in economic theory. Topics may include: empirical industrial organization, environmental economics, public finance, and international trade.

Components: LEC. Grading: GRD. Typically Offered: Spring.

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#### ECO 613. Microeconomics of Sustainability. 2 Credit Hours.

The course examines production and costs from a sustainability perspective, emphasizing the tradeoffs associated with reducing energy and other natural resources in production processes. Conditions under which reducing natural resources while using more of other inputs reduces total costs without sacrificing production are derived. Extensions are studied in which the same conditions are derived under a more general definition of costs which includes the costs of natural resource use to society and to brand reputation. The course then examines consumer demand for energy efficient products, emphasizing financing arrangements which allow the household to avoid the up-front fixed costs of energy efficient durable goods. Finally, the course examines externalities: actions by the firm which impose costs or benefits to society in a way which is not accounted for by prices. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall.

# ECO 614. Valuing Public Goods. 2 Credit Hours.

While the costs of becoming more sustainable are relatively straight forward for the firm to quantify, the benefits to society (social benefits) are more difficult to determine. Nonetheless, assessing how clientele and other external stakeholders value sustainable practices is important if firms are to prioritize their efforts. This course will introduce students to the world of non-market valuation: the valuation of goods and services for which no true market exists with prices to reveal how much consumers are willing to pay. This class will provide a solid foundation for any manager to begin to understand how to appropriately value sustainable practices, enabling the firm to choose projects that provide the most social benefit net of implementation costs.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

#### ECO 615. Managing Regulation Compliance. 2 Credit Hours.

Sustainability initiatives must be integrated with a complex set of government regulations. Regulation systems such as standards, tradeable permits, and taxes are analyzed from the firm's point of view. Regulation systems are also studied when compliance costs are uncertain or changing over time. Many modern regulation systems allow firms to earn credits by over-complying, which can be sold or banked for future use. The course will study compliance/credit management, including over the business cycle and when regulation changes over time. The value of compliance/over-compliance to the firm's brand and to society/external stakeholders is integrated into the optimal compliance decision.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

#### ECO 616. Sustainability and Market Dynamics. 2 Credit Hours.

The course studies the impact of sustainability initiatives on the organization of firms in the market. The course derives conditions under which sustainability initiatives favor market entrants over incumbent firms and the reverse. The course studies the use of sustainability initiatives by firms to segment the market. The value of sustainability initiatives in oligopolistic versus competitive markets are also studied. Finally, the value of sustainability initiatives and to the firm's brand is integrated with the benefits and costs of changes in the competitiveness of the market resulting from the sustainability initiatives.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 617. Enterprise Risk Management. 2 Credit Hours.

Tools for the measurement and mitigation of risk are developed. Measurement tools include value at risk measures, expert opinion, and the use of market prices. Mitigation tools include catastrophe bonds, derivatives such as weather derivatives, and adaptations (building resilience). Risks that are relevant to sustainability, such as fat tailed risk and environmental catastrophes, are emphasized. The value of environmental risk reduction to the firm and society are derived.

Components: LEC. Grading: GRD. Typically Offered: Spring.

#### ECO 620. Empirical Methods in Economics II. 3 Credit Hours.

Advanced methods for the analysis of economic models and data. Topics include Bayes and likelihood theory, endogeneity and selection, causal inference, time series methods, and panel data.

Components: LEC. Grading: GRD. Typically Offered: Spring.

#### ECO 621. Dynamic Economic Theory. 3 Credit Hours.

An introduction to the analysis of dynamic economic theory in economics and its applications. Topics include general equilibrium, economic growth and business cycles, optimal fiscal and monetary policy, and firm dynamics.

Components: LEC. Grading: GRD. Typically Offered: Spring.

# ECO 625. Advanced Empirical Methods & Applications I. 3 Credit Hours.

Practical applications of econometrics are surveyed. Computer packages are used to examine economic data. Topics include the series analysis, limited dependent variable modes, pooling cross section and time series data, model selection, and rational expectations models. **Components:** LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 633. Game & Information Theory II. 3 Credit Hours.

Advanced methods for the analysis of uncertainty, information, and strategic behavior. Topics include auctions, contract theory, financial intermediation, matching, and optimal assignment.

Components: LEC. Grading: GRD. Typically Offered: Spring.

#### ECO 634. Topics in Economic Theory & Applications II. 3 Credit Hours.

Selected topics and applications in economic theory. Topics may include: empirical industrial organization, environmental economics, public finance, and international trade.

Components: LEC. Grading: GRD. Typically Offered: Spring.

Typically Offered: Spring.

# ECO 643. Firms, Institutions, Stakeholders. 2 Credit Hours.

Understanding the role that firms play in society is of paramount importance. Indeed, many have recently challenged (1) traditional notions of what a firm is, (2) what the objectives of the firm are, and (3) how the firm operates in its institutional environment. In this course, students begin by learning what a firm is, especially by studying theoretical boundaries of the firm: what activities are best done by a firm and what activities are best done outside the boundaries of the firm? We will also discuss how these activities have changed over time and how the answer differs for corporations, closely held businesses, and non-profits. Students will then learn the objectives of the firm. Students will compare the traditional profit maximization objective with more recent notions which consider multiple stakeholders and environmental and social considerations. Students will learn how the pursuit of these objectives affects the welfare of society. Finally, students will learn how a firm operates within industry institutions (markets), economic institutions (capitalism, socialism, and mixed systems), and political institutions (democratic, technocratic, and autocratic). Throughout, students will learn how traditional strategic decisions (including mergers, market entry, choice of countries in a firm's supply chain, and R&D) depend critically on these institutions and objectives, which vary across countries and are changing over time.

Components: LEC. Grading: SUS.

Typically Offered: Fall.

#### ECO 645. Regulations Economics. 3 Credit Hours.

This course examines public policies for dealing with problems arising in markets in which competitive forces are weak. The focus is on monopolies, oligopolies, cartels, and other environments where market mechanisms are unlikely to produce outcomes that benefit consumers more than the alternatives involving costly government intervention.

Components: LEC.

Grading: GRD. Typically Offered: Offered by Announcement Only.

#### ECO 675. Latin America and the Global Economy. 3 Credit Hours.

Analysis of the economic, political, and social forces at work in the changing economies in Latin America.

Components: LEC. Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 680. Essentials of Economics. 2 Credit Hours.

This course provides an introduction to the core concepts of economics. Topics include allocation of scarce resources by the laws of supply and demand, use of the market place as the principle organizing and distribution tool of the economy, externalities, and market failure. Pollution of the environment is treated as a needed correction to be done by public regulation through taxation and legislation. The principal forms of firm organization and dissolution are also discussed. Applications of the laws of supply and demand are made to forecasting demand and analyzing cost structure. The entry and exit of firms and the valuation of the firm is also covered.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 685. Managerial Decisions in a Global Economy. 2 Credit Hours.

Modern techniques of economic analysis and decision science are applied to the management of the firm in a global environment. Business planning and the determinants of supply and demand are an integral part of the course. The principal forms of business organization and dissolution are reviewed. The major issues confronted by the firm: Principal-agent problem (or how to motivate managers to act in the best interest of the owners, the shareholders), moral hazard, discounting of free cash flow and terminal value, economies of scale and scope, and strategic management decision making are covered.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

#### ECO 690. Managerial Economics. 3 Credit Hours.

An economic study of the environment in which the decision making process takes place in management and the functional areas. Structured especially for students without an undergraduate background in economics. Credit not applicable toward 36-credit professional MBA component. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

#### ECO 691. Managerial Economics. 3 Credit Hours.

Application of economic analysis to the formulation and solving of management problems and the determination of business policy. **Components:** LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 692. Advanced Empirical Methods & Applications II. 3 Credit Hours.

Selected topics and applications in econometrics. Topics may include: machine learning, nonparametric estimation, and causal inference methods. Applications in various fields: finance, labor, environmental, health.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

#### ECO 693. Applied Managerial Economics. 1 Credit Hour.

Managerial Economics is the application of economic theory to decisions made by firms and managers. This course approaches managerial economics from the point of view of a data driven manager or firm, seeking to apply economic theory to make business decisions. The course starts by teaching students how to use data on costs, sales, and pricing available at any firm to compute key metrics that needed to apply economic theory to business decision making. Students will learn data-driven methods to make key business decisions, such as how much to produce, what price to charge, and advanced pricing strategies such as up- charging and price discrimination. Students will learn how to make these decisions in both competitive and imperfectly competitive industries. Given the explosion of data being collected in many industries, companies are increasingly focused on combining economic theory and data to make better decisions. Indeed, many firms such as Google and Microsoft are now have in-house economics departments (as well as economists who work at investment banks and consulting firms) to advise on such decisions. Because in general these very fundamental decisions are made by higher level executives, economics becomes critically important for CEOs and other senior executives. This is one reason why economics is the most common major among Fortune 500 CEOs.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

#### ECO 694. Game Theory and Economic Strategy. 1 Credit Hour.

Game theory is a powerful tool for making strategic decisions. This course teaches students how to use game theory to make better strategic decisions. The setting is a small group of firms (e.g. Apple and Samsung) or managers (e.g. a small team). In such settings, managers must anticipate decisions by others and react accordingly, and anticipate how others will react to their decisions. Game theory teaches students how to anticipate decisions by others, which allows for better strategy. The course will teach game theory tools for cases when managers make decisions simultaneously, when managers make decisions sequentially, and cases where managers have incentives to make their decisions hard to predict. Strategic decisions analyzed include price competition, market segmentation, market entry/exit, flash sales, cartels and collusive behavior, strategic inventory decisions, entry deterrence, and many others.

Components: LEC. Grading: GRD.

Typically Offered: Fall.

#### ECO 695. Global Economics. 2 Credit Hours.

This is a course in global economics with focus on economic policies and country risk. We study the aggregate behavior of macroeconomics variables that are relevant for business decisions. We take into account the interaction of the national economy with the rest of the world. In other words, we do global economics and study the roles of monetary and fiscal policies in an open economy, foreign direct investment, and the exchange rate. **Components:** LEC.

Grading: GRD.

Typically Offered: Fall.

# ECO 698. Selected Topics. 1-3 Credit Hours.

Topics in selected areas of specialization. Components: LEC. Grading: GRD. Typically Offered: Offered by Announcement Only.

# ECO 699. Directed Study. 1-3 Credit Hours.

Graduate-level supervised readings, individual research project or independent investigation of selected economics problems. Offered only by special arrangement with supervising faculty member, who approves topic and evaluation process at time of registration. **Components:** LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

# ECO 750. Applied Economics: IO. 3 Credit Hours.

The first part of the course will focus on static analysis of market outcomes. The emphasis will be on empirical work, and there will be a number of places where we take digressions into econometric and computational issues. The second part will focus on related fields (bargaining, auctions and market design), and then move on to dynamic analysis in I.O. (both single and multiple agent dynamic models). PRE-REQUISITE: ECO 602 AND ECO 633.

Components: LEC. Grading: GRD.

Typically Offered: Offered by Announcement Only.

# ECO 760. The Theory of International Trade. 3 Credit Hours.

This course presents rudiments in trade theory and open macroeconomics. International arbitrage as well as determination of the values of currencies and stocks.

Components: LEC. Grading: GRD. Typically Offered: Offered by Announcement Only.

# ECO 830. Pre-Candidacy Dissertation Research. 1-12 Credit Hours.

Doctoral dissertation credits taken prior to Ph.D. student's candidacy. The student will enroll for credit as determined by his/her advisor. Not more than 12 hours of ECO 830 may be taken in a regular semester, nor more than six in a summer session.

Components: THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

# ECO 840. Post-Candidacy Dissertation Research. 1-12 Credit Hours.

Doctoral dissertation credits taken after Ph.D. student has been admitted to candidacy. The student will enroll for credit as determined by his/her advisor. Not more than 12 credits in ECO 840 may be taken in a regular semester, nor more than six credits in a summer session **Components:** THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

# ECO 850. Research in Residence. 1 Credit Hour.

Used to establish research in residence for the Ph.D. and D.A., after the student has been enrolled for the permissible cumulative total in appropriate doctoral research. Credit not granted. May be regarded as full-time residence as determined by the Dean of the Graduate School. **Components:** THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

# ECO 860. The Theory of International Trade. 3 Credit Hours.

This course presents rudiments in trade theory and open macroeconomics. International arbitrage as well as determination of the values of currencies and stocks.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.