

# ECONOMICS (ECO)

## ECO 1305 Issues in Economics for Non-Business Majors (3)

Note: ECO 1305 does not count towards either an economics major or a business degree. This course provides an introduction to basic economic concepts, models, and tools used in economic analysis. In order to develop an appreciation for the value of economic analysis, applications are emphasized throughout the course. Students have the opportunity to apply the tools of economic analysis to a variety of issues including price controls, taxes, poverty, pollution, discrimination, competitive and monopolistic markets, economic growth, inflation and unemployment.

## ECO 1313 Economic Principles for BASE Program (3)

Pre-requisite(s): Only open to Business Administration Summer Experience (BASE) minors

This course acts as a core introductory economics course for students participating in the Business Administration Summer Experience (BASE). Students will obtain foundational skills that will provide a better understanding of additional disciplines covered in the BASE program. This course aims to expose students to the basics of the economic approach to understanding the actions and choices of agents in the economy, e.g. consumers, households, governments and businesses.

## ECO 1380 Introduction to Economic Analysis and Policy (3)

Pre-requisite(s): Admission in the University Scholars Program, Baylor Business Fellows Program, or Baylor Business Scholars Program; or consent of department

The nature and outcomes of economic decision-making at the individual, market, and aggregate levels. Rooted in traditional neoclassical economics and augmented with insights from the literature on transactions costs and institutions. Special attention is paid to questions of morality underlying economic decision-making.

## ECO 2306 Principles of Microeconomics (3)

Microeconomic analysis including the theories and applications of demand, production, industrial organization, international trade, and Christian ethics in economic decisions.

## ECO 2307 Principles of Macroeconomics (3)

Pre-requisite(s): A minimum grade of C in ECO 2306

A study of basic economic concepts, business organization, economic role of government, national income analysis, national income theory, money and banking, and the business cycle.

## ECO 3305 Money and Banking (3)

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; and a minimum grade of C in MTH 1309 or MTH 1321

A study of the structure and functioning of American financial institutions; the functioning of financial markets and the nature of security prices and interest rates; the basic concepts of bank management; the nature of money and the role of the central bank in its creation; the basic structure of the economy and the impact of monetary actions on this structure; and the basic tenets of Monetarism and modern Keynesian monetary theory.

## ECO 3306 Intermediate Microeconomic Analysis (3)

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; and a minimum grade of C in MTH 1309 or MTH 1321

Designed to provide an intensive study of contemporary microeconomic theory. Topics include consumer demand; market structure; production theory; the nature and behavior of costs; the pricing and allocation of productive resources; and the distribution of income. Emphasis is given to the use of these tools in business decision making.

## ECO 3307 Intermediate Macroeconomic Analysis (3)

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; and a minimum grade of C in MTH 1309 or MTH 1321

Theories of long-term growth and short-term fluctuations in national economies, with emphasis on the macroeconomic implications of government policy. Topics include the national income accounting, long-run economic growth, unemployment, inflation, interest rates, exchange rates, international trade and investment, alternative theories of the business cycle, monetary policy, and fiscal policy.

## ECO 3308 Engineering Economic Analysis (3)

Designed to provide an economic foundation for engineering decisions. The course stresses methods for making optimum choices among engineering alternatives. Topics include cash flow and present value analysis; break-even analysis; the impact of taxes and inflation on investment decisions; methods for assigning costs; the treatment of risk in decision making; and capital budgeting. (Will not count toward a major in economics.)

## ECO 3321 Global Food Economy (3)

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; and a minimum grade of C in MTH 1309 or MTH 1321; BBA students must be admitted to the Business School in order to take this course

Over 3 billion persons are food insecure around the world, and, of those, almost 1 billion are malnourished. Ensuring that no one suffers from hunger is one of the key challenges facing our world today. The World Food Economy course provides an understanding of why food insecurity exists and what can be done to alleviate food insecurity. The first half of the course is structured around global agricultural supply chains and the process of bringing food from farm to home. This will include some of the key challenges and opportunities facing the supply chain including agricultural biotechnology, a changing climate, and global trade patterns, etc. The second half of the course covers global food demand. Like with supply, we will cover some of the key factors influencing food demand including income growth, prices, changing preferences for food, and social safety net programs.

## ECO 3331 International Economics (3)

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306 and ECO 2307; and junior standing

International trade theories, trade policies and their effects, regional economic integration, international economic organizations, trade problems of less developed countries, determination of exchange rates, and functioning of the international monetary system. A student may not earn credit in both ECO 3331 and INB 3332.

**ECO 3337 Sports Economics (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; and a minimum grade of C in MTH 1309 or MTH 1321; BBA students must be admitted to the Business School in order to take this course

This course introduces students to the fields of microeconomics by examining how economic concepts apply to the business and practice of sports. Fields of study include game theory, labor economics, economics of information, negotiation, and betting markets/finance. Questions addressed include how imperfect information affects decision-making (e.g., when should coaches go for it on 4th down?), how much professional athletes are "worth" to their teams, how economists test for different types of discrimination, how to negotiate the best deal possible and maximize the total gains from trade, what it means for sports betting markets (and financial markets) to be efficient, and how players and teams behave in games of strategic interaction. Importantly, the concepts studied will also be examined in contexts outside of sports.

**ECO 3347 Introduction to Econometrics and Data Analysis (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306 and ECO 2307; a minimum grade of C in QBA 3305, STA 2381, or STA 3381

Topics include statistical sampling, hypothesis testing, an introduction to economic data, estimation of univariate and multivariate linear models, and basic extensions.

**ECO 3390 Topics in Economics (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; and a minimum grade of C in MTH 1309 or MTH 1321

Topics in the study of economics not covered by regular course offerings. Course may be repeated once for credit when topics vary.

**ECO 4314 Behavioral and Experimental Economics (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306; BBA students must be admitted to the Business School in order to take this course

Application of the scientific method to economics using laboratory experimentation to test economic theories about individual and group behavior. Introduction of insights to economic modeling from psychology and other social sciences. Emphasis on the frontiers of research through study of journal articles.

**ECO 4316 Economics of Firms, Industries, and Markets (3)**

Pre-requisite(s): ECO 3306; BBA students must be admitted to the Business School in order to take this course

Examines the economic organization of industry; a survey of major theoretical and applied issues in the field of industrial organization. Topics include theory of the firm, the welfare consequences of competition and market power, goals of the firm and market effects, collusion, mergers, price discrimination, product differentiation, predation, and public policy.

**ECO 4318 Law and Economics (3)**

Pre-requisite(s): A minimum grade of C in ECO 3306

Interrelationship of microeconomic theory and the law. The course looks at both the effects of law on economic activity and the effects of economic forces on the development of the law. Particular areas of law that will be discussed include property, contracts, torts, and procedure.

**ECO 4319 Game Theory (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306; BBA students must be admitted to the Business School in order to take this course

An elementary examination of the theory of games and strategic behavior with an emphasis on applications. Topics discussed include strategic form games, extensive form games, and games of asymmetric and incomplete information. Various equilibrium concepts will be discussed. Applies game theoretic concepts to strategic behavior in the social sciences, particularly economics and political science, with applications ranging from cartel behavior to international diplomacy.

**ECO 4320 The Economics of Government (3)**

Pre-requisite(s): A minimum grade of C in ECO 3306 Sources of public revenues, problems of the revenue system, public expenditures and budgeting, and public borrowing

**ECO 4321 Energy Economics (3)**

Analysis of energy markets, with a focus on static and dynamic efficiency. Oil, natural gas, coal, nuclear, and renewables (including wind, solar, hydro, geothermal, and biofuels). Regulation and deregulation in electricity and natural gas markets. Energy derivatives. Policy issues related to market externalities, including pollution and climate change.

**ECO 4323 The Environment and Economic Analysis (3)**

Economic analysis in description, analysis, and policy formulation of environmental problems such as natural resource development, ecology, energy needs, noise, water, and air pollution. Economic tools used will include social welfare analysis, externalities, and benefit cost analysis.

**ECO 4325 Urban and Regional Economic Analysis (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and ECO 2307; junior standing; BBA students must be admitted to the Business School in order to take this course

Focuses on the use of economic tools to analyze the key intraregional markets-land and housing, transportation, labor and public services and examines their public policy implications. Also examines interregional relationships, the growth and decline of cities, and the economics of urbanization.

**ECO 4333 Foreign Exchange Markets (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306 and 2307; junior standing; BBA students must be admitted to the Business School in order to take this course

Description and analysis of currency markets, emphasizing their roles in the business environment. Topics include spot forward, futures, and options markets, currency, and interest rate swaps, models of exchange rate determination, the operation and relative merits of fixed and flexible exchange rate systems, and the management of exchange rate risk by business.

**ECO 4334 Economic Development (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306 and 2307; junior standing; BBA students must be admitted to the Business School in order to take this course

Critical analysis of current explanations of economic growth and development, involving historical aspects, policies for achieving development in emerging countries, and conditions necessary for continued growth in advanced countries.

**ECO 4336 Economics of Labor (3)**

Pre-requisite(s): ECO 3306; BBA students must be admitted to the Business School in order to take this course

Neoclassical approach to labor market analysis. Special attention is paid to the study of labor market phenomena from a microeconomic perspective, including the theory of wage rate determination, the concept of investment in human capital, the problems of race and sex discrimination, unemployment, and the impact of unionization on the structure of wages. Upon completion of this course a student will have a general working knowledge of the state of the art in labor market analysis and research.

**ECO 4338 Economic Systems of the World (3)**

Pre-requisite(s): Junior standing; BBA students must be admitted to the Business School in order to take this course

An examination of the institutional structures and relative performance of representative capitalist and socialist economies of the world. Countries surveyed include the United States, Britain, France, Germany, Japan, the former Soviet Union, Hungary, China and Yugoslavia.

**ECO 4343 History of Economic Thought (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306 and 2307; junior standing; BBA students must be admitted to the Business School in order to take this course

Development of economic thought in relation to its economic and institutional background from the ancient philosophers to Alfred Marshall and neoclassical economists. Emphasis is placed on the contributions to economic thought of the founders.

**ECO 4347 Advanced Econometrics (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306 and 2307; a minimum grade of B in ECO 3347, STA 2381, or STA 3381; BBA students must be admitted to the Business School in order to take this course

This course covers advanced econometric theory and techniques in preparation for graduate studies or writing a thesis. These include constructing econometric models, discrete choice analysis, research design, and introduction to causal inference.

**ECO 4349 Causal Inference and Research Design (3)**

Pre-requisite(s): A minimum grade of C in ECO 3347 or ECO 4347

Introduction to modern tools for determining the existence of causal relationships among variables. Emphasizes both the design of the research process and the use of advanced econometric techniques.

**ECO 4350 Economics of Health and Medical Care (3)**

Pre-requisite(s): A minimum grade of C in ECO 1380, or a minimum grade of C in ECO 2306; BBA students must be admitted to the Business School in order to take this course

Economic aspects of health and medical care: theory, empirical evidence, history, institutions, and public policy.

**ECO 4351 Data Science I (3)**

Pre-requisite(s): A minimum grade of B in ECO 3347 or ECO 4347

Best practices in data collection, cleaning, manipulation, and data and code management. Methods and principles of data exploration and visualization. Unsupervised statistical learning techniques, supervised statistical learning techniques, and false discovery principles.

**ECO 4352 Data Science II (3)**

Pre-requisite(s): A minimum grade of B in ECO 4351

Assessing model accuracy, resampling methods, model selection, regularization, and dimension reduction. Machine learning techniques and their applications in economic research.

**ECO 4390 Advanced Topics in Economics (3)**

Pre-requisite(s): Minimum grade of C in ECO 3306

Advanced topics in the study of economics not covered by regular course offerings. Course may be repeated once for credit when topics vary.

**ECO 4V98 Special Studies in Economics (1-6)**

Pre-requisite(s): Not open to pre-business students

With the consent of the chair of the Department of Economics, this course may be taken for one to six semester hours of credit.

**ECO 4V9R Undergraduate Research in Economics (3)**

Pre-requisite(s): Consent of the instructor

Undergraduate research undertaken with the supervision of a faculty member. May be taken in multiple semesters for a maximum of 6 hours.