ECONOMICS (ECON)

ECON 101 | PRINCIPLES OF MICROECONOMICS
Units: 3-4 Repeatability: No
Core Attributes: First year Integration, Social/Behavioral Inquiry area
An introduction to consumer behavior and the theory of the firm. Topics include the demand behavior of households, the supply behavior of business firms, an introduction to market structure, market equilibrium, market failures, the workings of input markets, international trade and the role of the government in the economy.

ECON 102 | PRINCIPLES OF MACROECONOMICS
Units: 3
Core Attributes: Social/Behavioral Inquiry area
Prerequisites: ECON 101
The study of the operation of the American economy in an international setting, examining the interaction of households, business firms, government, and the rest of the world in resource, product, and financial markets. Topics include national income accounting and analysis, business fluctuations, inflation, unemployment, and monetary and fiscal policy.

ECON 201 | INTERMEDIATE MICROECONOMICS
Units: 3 Repeatability: No
Prerequisites: ECON 101 and (MATH 130 Can be taken Concurrently) or MATH 150 (Can be taken Concurrently) or MATH 151 (Can be taken Concurrently)
The economic theory of demand, production, product and input markets, welfare, and general equilibrium. Applications of price theory, including its use in evaluating and forming public policy.

ECON 202 | INTERMEDIATE MACROECONOMICS
Units: 2-3
Prerequisites: ECON 102
Examine the causes of fluctuations in important national economic variables, such as aggregate output, interest rates, the rate of inflation, the rate of unemployment, and exchange rates. Investigates the feasibility of stabilizing the economy through the use of fiscal and monetary policy.

ECON 216 | STATISTICS FOR BUSINESS AND ECONOMICS
Units: 4
Core Attributes: Quantitative reasoning comp
Prerequisites: MATH 130 or MATH 150
A systematic study of the issues and problems of applying and interpreting statistical analyses of business situations. Topics include descriptive statistics, probability, random variables and their distributions, statistical inference, multiple regression and residual analysis, correlation, classical time-series models, and forecasting. Extensive computer analysis of data.

ECON 217 | APPLIED REGRESSION ANALYSIS
Units: 1 Repeatability: No
Core Attributes: Quantitative reasoning comp
Prerequisites: MATH 130 or MATH 150
A course in applied regression analysis with applications to Business and Economics. Emphasis on simple and multiple regression modeling and interpretation of results. Topics include a review of hypothesis testing for means and proportions; correlation; simple and multiple regression analysis including linear and non-linear models, residual analysis, the use of categorical variables, time series analysis, and forecasting. Extensive computer analysis of data, especially using Microsoft Excel.

ECON 294 | MACRO GLOBAL ISSUES
Units: 1-3
ECON 333 | INTERNATIONAL ECONOMICS  
Units: 3  Repeatability: No  
Prerequisites: ECON 102 and (MATH 130 or MATH 150 or MATH 151)  
The theory, practice, and institutions of the international economy. Topics include international trade and investment, balance of payments, foreign exchange rates, determination, multinational enterprises, trade with developing countries, and international economic policy.

ECON 335 | ECONOMIC DEVELOPMENT OF LATIN AMERICA  
Units: 3  Repeatability: No  
Prerequisites: ECON 101 and ECON 102 and (MATH 130 or MATH 150 or MATH 151)  
An analysis of the determinants of economic development and growth in developing countries in general and Latin America in particular, along with associated problems and policies. Topics include theories and policies concerning population, income distribution, education, capital formation, finance, agriculture, industry, trade, and economic planning. Prerequisites: ECON 101 and ECON 102 and (MATH 130 or MATH 150 or MATH 151).

ECON 337 | ECONOMIC DEVELOPMENT OF ASIA  
Units: 3  Repeatability: No  
Prerequisites: ECON 101 and ECON 102 and (MATH 130 or MATH 150 or MATH 151)  
An analysis of the determinants of economic development and growth in Asia and the Pacific Rim, along with associated problems and policies. Topics include theories and policies concerning population, income distribution, education, capital formation, finance, agriculture, domestic savings and investment, human resources, international trade, foreign capital, and external debt.

ECON 339 | LATIN AMERICA BUSINESS ENVIRONMENT  
Units: 3  Repeatability: No  
Prerequisites: ECON 101 and (MATH 130 or MATH 150 or MATH 151)  
This course is designed to prepare participants to work effectively in or with Latin American organizations by providing an understanding of the issues, opportunities, and complexities associated with doing business in the region. The focus is on the cultural, historical, economic, social, political and business environments in Latin America and on the activities of companies operating in Latin America, both foreign and domestic. Successful Latin American companies competing internationally will also be an aspect of the course. Upon successful completion of the course, students will possess an awareness of the business and economic environments in Latin America, and be able to demonstrate analytical and strategic thinking skills that reflect an understanding of the competitive environment in which local and foreign companies operate in Latin America.

ECON 340 | BEHAVIORAL ECONOMICS  
Units: 3  Repeatability: No  
Prerequisites: ECON 102 and (MATH 130 or MATH 150 or MATH 151)  
Examines models in which standard economic rationality assumptions are combined with evidence from psychology to predict behavior. Topics include prospect theory, biases in judgment, fairness, altruism, bounded rationality, and the use of heuristics in decision making.

ECON 353 | SPORTS ECONOMICS  
Units: 3  Repeatability: No  
Prerequisites: ECON 101 and (MATH 130 or MATH 150 or MATH 151)  
The application of economic principles to analyze a wide range of issues in professional sports and collegiate athletics. Principles from the economics of labor markets, industrial organization, and public finance are applied to the analysis of sports issues. Issues discussed include league formats, rival leagues, franchise relocation and venue location, player salaries, free agency, salary caps, arbitration, player development, discrimination, NCAA rules on scholarships and eligibility, financial aspects of collegiate athletic programs, revenues from merchandising and broadcast rights, and economic impact analysis of sports teams on a local community.

ECON 370 | APPLIED ECONOMETRICS  
Units: 3  Repeatability: No  
Prerequisites: ECON 201 and ECON 202 and (ECON 216 or ECON 217) and (MATH 130 or MATH 150 or MATH 151)  
A hands-on experience in econometric analysis designed to help students acquire the skills necessary to carry out their own empirical research in economics. Various aspects of empirical research in economics will be covered, including development of testable economic models, appropriate use of data, and specification and estimation of econometric models. Topics covered include: Ordinary Least Squares (OLS) applied to simple and multiple regression models, hypothesis testing, proper specification of models, multicollinearity, heteroskedasticity, serial correlation, cross sectional and time series models, binary-choice models, simultaneous equation models, panel data analysis, and forecasting. This course focuses on the development of practical skills associated with constructing regression equations that describe data sets appropriately, and providing economic interpretations to the results. The course includes hands-on laboratory assignments using Stata software. (Note: normally offered only during fall semester).

ECON 375 | GAME THEORY  
Units: 2-3  Repeatability: No  
Prerequisites: ECON 101 and (MATH 130 or MATH 150 or MATH 151)  
Develops a conceptual framework to understand strategic behavior in economics and business environments and examines models of strategic thinking in interactive situations. Analyzes how to represent strategic situations as games and develops basic solution concepts to predict their outcomes. Topics include the use of credible threats and promises, repeated games, backward induction, strategic use of information through signaling, and bidding in auctions.

ECON 376 | APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)  
Units: 3  Repeatability: No  
Prerequisites: ITMG 100 and (MATH 130 or MATH 150 or MATH 151)  
An introduction to geospatial, or geographic, information systems (GIS) applied to organizational and environmental decision-making applications. The course provides background knowledge to identify spatial characteristics of many decision-making situations and to integrate spatial thinking and GIS analysis into the student’s academic studies and career. The course includes hands-on laboratory tutorials and projects using ArcGIS 10 desktop GIS software.

ECON 385 | BUSINESS ANALYTICS STRATEGY  
Units: 3  Repeatability: No  
Prerequisites: ITMG 100 and (ECON 216 or ECON 217) and (MATH 130 or MATH 150)  
Business analytics refers to the ways in which enterprises such as businesses, non-profits, and governments can use data to gain insights and make better decisions. The ability to use data effectively to drive rapid, precise and profitable decisions has been a critical strategic advantage for many companies. In this course we will examine how managers and other stakeholders can apply advanced statistical techniques and tools that are central to the analysis of structured data that is used in business decision making. Data visualization and exploratory analysis will be emphasized as a key first step in the analytics process. Students will go through the process of identifying the data needs of a company, identifying key questions, identifying and exploring data sources to address these needs & questions, study design, strategy for implementation of study design, and communication of results. Special emphasis will be on communicating and translating analytic information into actionable business intelligence. Students will explore a variety of industry sectors (business, financial, technology, healthcare, sports, social innovation/ “big data for social good”, social media).
ECON 386 | BIG DATA AND BUSINESS  
**Units:** 3  **Repeatability:** No  
**Prerequisites:** ITMG 100 and (ECON 216 or ECON 217) and (MATH 130 or MATH 150)

Analytics is the process of transforming data into insight in order to make better informed decisions. Understanding and interpreting data has become an even more integral part of understanding social interactions and behavior since the advent of big data and automated extraction. Accordingly, this lab-style course will provide a solid foundation for understanding data science and analytics problems in the context of modern big data methodology, philosophy, and application to business problems. Topics include, but are not limited to, database & repository management; scripting & automation; scraping, cleaning, and harmonizing data; exploratory analysis & data visualizations, documentation & reproducibility, ethics & client interactions, practical machine learning algorithms (ranging from multiple linear regression to neural networks and support vector machines), and regularization, generalization, and validation. By the end of the course, you will be able to extract, clean, and harmonize data to use in a predictive algorithm that you will be able to build yourself as part of a data product application.

ECON 414 | INVESTMENT ECONOMICS  
**Units:** 3  **Repeatability:** No  
**Prerequisites:** ECON 102 and (ECON 216 or ECON 217) and (MATH 130 or MATH 150 or MATH 151)

An overview of the economic foundations of modern finance, including individual preferences and decision-making in the face of uncertainty, how investors apply this decision-making framework to choose a portfolio of assets (Markowitz Portfolio Theory), the equilibrium pricing implications of these decisions (CAPM, Arbitrage Pricing Theory, Derivatives), and the role of asset prices and financial markets in the wider macroeconomy.

ECON 424 | INDUSTRIAL ORGANIZATION  
**Units:** 3  **Repeatability:** No  
**Prerequisites:** ECON 102 and (MATH 130 or MATH 150 or MATH 151)

Combining microeconomic theory, game theory, and empirical results to explore the relationships among firms within and across industries and to examine the nature of strategic interaction among firms. The focus is on the structure and performance of markets that are imperfectly competitive, including entry deterrence strategies and barriers to entry, vertical control, market segmentation and price discrimination, mergers and acquisition, price and non-competition, and market equilibria with incomplete information.

ECON 471 | BUSINESS CYCLES AND FORECASTING  
**Units:** 3  **Repeatability:** No  
**Prerequisites:** ECON 102 and (ECON 216 or ECON 217) and (MATH 130 or MATH 150 or MATH 151)

Examines the business cycle and techniques for forecasting fluctuations. The emphasis of the course is to gain hands-on exposure to specific business forecasting techniques and learn to apply them to limit the range of uncertainty in management decision making. Specific techniques covered include lead-lag, exponential smoothing, and econometric and ARIMA (Box-Jenkins) time series analysis.

ECON 473 | MANAGERIAL ECONOMICS  
**Units:** 3  **Repeatability:** No  
**Prerequisites:** ECON 102 and (ECON 216 or ECON 217) and (MATH 130 or MATH 150 or MATH 151)

The application of analytical techniques and economic principles to analyze typical problems encountered by managers. Topics include risk analysis, demand analysis and estimation using multiple regression analysis, sales forecasting, production analysis, cost estimation, pricing decisions, game theory, market structure and capital budgeting. (Note: offered only during the spring semester).

ECON 480 | MATHEMATICAL ECONOMICS  
**Units:** 3  **Repeatability:** No  
**Prerequisites:** ECON 102 and MATH 150

An introduction to mathematical techniques used to analyze economic problems to gain a deeper understanding of economic decision making through the use of mathematical models. Topics include comparative statistics, optimization problems, dynamics, and mathematical programming. Mathematical techniques covered include matrix algebra, differential and integral calculus, differential equations, and difference equations.

ECON 490 | SENIOR SEMINAR  
**Units:** 3  **Repeatability:** No  
**Core Attributes:** Advanced writing competency, Advanced Integration, Oral communication competency  
**Prerequisites:** ECON 201 and ECON 202 and ECON 370 and (MATH 130 or MATH 150 or MATH 151)

This “capstone” course is designed to enhance research, critical thinking, and analytical skills for students majoring in economics and business economics. Students will use quantitative tools and the theoretical foundations learned in prior economic courses to analyze current economic problems and social issues. Requires integrating a variety of tools and techniques from economics, quantitative reasoning, critical thinking and information literacy, and social and behavioral inquiry to empirically test and provide implications about self-selected research questions. Students will sharpen their oral presentation, writing and technical analytical skills as they work on individual research and discussion topics, culminating in a final Economics research paper and presentation. (Prerequisite note: Last semester senior standing).

ECON 494 | SPECIAL TOPICS  
**Units:** 1-4  **Repeatability:** Yes (Can be repeated for Credit)  
**Prerequisites:** ECON 102 and (MATH 130 or MATH 150 or MATH 151)

Topics of current interest in economics. Course content and structure will differ depending on instructor. Consult your advisor for course description for any given semester. May be repeated once for credit.

ECON 498 | INTERNSHIP  
**Units:** 1-3  
**Prerequisites:** (MATH 130 or MATH 150)

Experiential learning working in a business, government, or nonprofit organization. Placements provide the opportunity for practical application of economics, business, and accounting principles. Placement must emphasize economics field. See schedule of classes for special meeting times. This course may not be repeated for credit.

ECON 499 | INDEPENDENT STUDY  
**Units:** 1-3  **Repeatability:** Yes (Can be repeated for Credit)  
**Prerequisites:** (MATH 130 or MATH 150)

Study of economic theory and public policy through selective readings and research. A maximum of 3 units of independent study may be used to satisfy requirements for the major.