

Economics

Professors: *Bookman, Prendergast (Emeritus)*

Associate Professors: *Dragonette (Emeritus), Fox, Liebman (Chair), Pardo*

Assistant Professors: *Balasubramaniam, Crispin*

Visiting Assistant Professor: *Burke*

Adjunct Professors: *Brown, Freedman, Heron, Kelly, Mallowe, Ostick*

In its introductory courses the Economics Department tries to give students an appreciation of the way economists view the world and some acquaintance with the economist's techniques for analyzing problems. It strives to produce persons who will be informed and valuable participants in public and private decision-making.

Beyond that, the Department endeavors to offer a sufficient range of upper division courses so that students with a variety of intellectual and after-graduation career plans might be able to select a set of courses that matches individual interests and provides an appropriate preparation for individual careers. Department advisors will help students select the best assortment of courses for those going into graduate training in economics and business, to law school, and for those going into employment in business, not-for-profit enterprises, or government.

Learning Goals and Objectives

Goal 1: Students will understand how all issues in economics involve making choices in the context of scarcity.

Learning Objective 1.1: Students will be able to explain the concept of opportunity cost.

Learning Objective 1.2: Students will understand the concept that decision-making takes place at the margin and explain how this affects the behavior of consumers and firms.

Goal 2: Students will understand how economic agents interact .

Learning Objective 2.1: Students will be able to explain the supply and demand model and how it is applied to input and output markets as well as the macroeconomy.

Goal 3: Students will be able to identify important economic variables, understand how they are measured, and explain what they tell us .

Learning Objective 3.1: Students will be able to define and know the approximate value of some key macroeconomic variables in the US, including GDP growth, inflation, and unemployment, and interest rates. Furthermore, students will know how these variables are measured, how they affect us and understand the difference between "nominal" and "real" values.

Goal 4: Students will understand how public policy impacts the economy.

Learning Objective 4.1: Students will be able to explain how fiscal and monetary policy work .

Learning Objective 4.2: Students will be able to explain how markets sometimes "fail" and how public policy can address these problems .

Requirements for the Economics Major

GEP University Distribution

GEP Signature Courses (See Curricula): six courses

GEP Variable Courses (See Curricula): six to nine courses, including:

- A. Social/Behavioral Sciences: Principles Microeconomics (ECN 101)
- B. Natural Science: A natural science course with a laboratory, or two courses without a laboratory
- C. GEP Overlays (See Curricula):
- D. Math "Beauty"

Students can take any math "Beauty" course to fulfill the requirement of the GEP. However, we recommend:

- | | |
|---------|---|
| MAT 131 | Linear Methods |
| MAT 132 | Mathematics of Games and Politics |
| MAT 134 | The Mathematics of Uncertainty: Counting Rules and Probability |
| MAT 155 | Fundamentals of Calculus (Students who earn a 4 or 5 on the AB or BC Calculus AP test have fulfilled the Math Beauty requirement) |
| MAT 161 | Calculus I (Students who earn a 4 or 5 on the AB or BC Calculus AP test have fulfilled the Math Beauty requirement) |

- E. Integrated Learning Component (ILC): Economics majors must take one course from each of the following three categories

1. Any Statistics Course, including:

MAT 118 Introduction to Statistics
MAT 128 Applied Statistics
MAT 322 Mathematical Statistics

2. Brief Business Calculus

Note: For students who have already taken Calculus 1, no additional math courses are required for the economics major. For these students, the second ILC course may be satisfied with one of the following:

Any additional math course (this is in addition to the Beauty requirement and the statistics requirement). For students considering graduate school in economics, we highly recommend additional courses in Calculus or linear algebra.

Any Computer Science (CSC) course
Any Social Science course
Economic Ethics (THE 373)

3. Choose one of the following:

An additional math course (this is in addition to the Beauty requirement, the statistics requirement, and the Brief Business Calculus course listed above). For students considering graduate school in economics, we highly recommend students take at least a year of calculus.

Any Computer Science (CSC) course
Any Social Science course
Economic Ethics (THE 373)

Major Concentration:

ECN 301 Microeconomic Theory
ECN 302 Macroeconomic Theory

Economics Majors can choose either the Standard Economics track or the Quantitative Track:

Standard Economics Track
Any six additional ECN 300/400-level economics courses

Quantitative Track

ECN 410 Econometrics

Three additional ECN 300/400-level economics courses approved for the quantitative track. This currently includes Game Theory (ECN 365), Economic Forecasting, (ECN 415) Monetary Economics (ECN 350), and International Macroeconomics (ECN 322). Student may choose to take Labor Economics (ECN 330) as a quantitative-track course, but this will involve additional coursework

Minor in Economics

The minor in economics requires ECN 101-102 and four economics courses numbered ECN 300 level or higher.

Requirements for departmental honors

Requirements for departmental honors are found under Honors Programs and in the brochure published annually by the Director of Honors programs.

Advisory option—teacher certification in social studies

Economics majors may receive teacher certification in social studies by using their electives to take courses in education, including supervised teaching, as specified under Education in this Catalog. Candidates for certification should consult Dr. Keefe, coordinator, as early as possible.

Economics Courses

ECN 101 Introductory Economics (Micro) (3 credits)

By analyzing the behavior of buyers and sellers in product and factor markets, this course explains how a market economy determines how scarce resources are allocated to the production and distribution of various goods and services. Supply-and-demand models are used to explain the determination of the prices of products and of factor inputs, and the consequences of government controls and of different types of market structures on prices, wages, and economic efficiency are analyzed.

ECN 102 Introductory Economics (Macro) (3 credits)

Theoretical models of the economy as a whole, show what determines the level of national output, employment, and prices, and how these might be stabilized by the proper fiscal and monetary policies. The course also looks at the mechanism by which our money supply changes, and considers the benefits and problems associated with international trade. Topics covered include the

measurement of GDP, inflation and unemployment; Keynesian and Classical theories of output and price determination; the Federal Reserve System; the federal *budget and the national debt*; and the *balance of payments*. *ECN 101 not prerequisite for ECN 102.*

ECN 301 Microeconomic Theory (3 credits)

This course presents an analysis of the behavior of households as buyers of output and suppliers of inputs, an analysis of firms as suppliers of output and buyers of inputs, and a study of their interaction in markets that determines the prices and quantities of outputs and inputs. Applications of analytical tools are demonstrated.

Prerequisite: ECN 101.

ECN 302 Macroeconomic Theory (3 credits)

This course examines a complete model of the economy to show the forces that determine the rate of unemployment, the rate of inflation, the rate of growth, and the international financial position of an economy. This model is used to show the logic of, and the limitations of, monetary, fiscal, and other stabilization policies.

Prerequisite: ECN 102.

ECN 321 International Trade (3 credits)

This course investigates a primary component in the study of international economics: the causes and effects of international trade and barriers to trade. The class begins with an overview of world trade patterns and then focuses on classical and modern trade theory, exploring the Ricardian and Heckscher-Ohlin models, as well as non-comparative advantage based models that incorporate economies of scale and monopolistic competition. The second part of the class focuses on trade policy, starting with a theoretical analysis of tariffs, and then investigating the debate over free trade as it pertains to both developing and advanced economies. The class also looks at the economic institutions involved in the management of global trade, such as the World Trade Organization.

Prerequisite: ECN 101.

ECN 322 International Macroeconomics (3 credits)

This course investigates international macroeconomic theory and its application to current events and policy issues, including the study of the principles and practices of the balance of payments, exchange rates, and international money markets for achieving both domestic and

international policy objectives. Coverage includes the description and history of financial crises, currency policy, the development of international financial markets and the relevant national and international institutions.

Prerequisite: ECN 102; ECN 101 is recommended.

Note: counts towards the quantitative track./

ECN 330 Economics of Labor (3 credits)

This course concentrates on the analysis of the major contemporary issues concerning labor relations and labor unions; in particular: unemployment, wage-price relations, the settlement of disputes, minimum-wage legislation, wage differentials and discrimination, and competition from imports. Discussion is not confined to the purely economic dimensions of these topics. The course includes descriptive material on the development and present structure of the labor union movement in this country and on the more interesting and significant features of labor-management relations in selected foreign countries.

Prerequisite: ECN 101.

Note: Can be counted towards quantitative track with the completion of additional coursework and permission of the instructor.

ECN 340 Public Economics (3 credits)

This course examines the nature of government spending, the decision-making process, and trends. It describes and evaluates several kinds of taxation and proposals for reform. It utilizes microeconomics to investigate tax incidence and the welfare effects of taxation.

Prerequisite: ECN 101.

ECN 350 Monetary Economics (3 credits)

The course analyzes the nature and functions of money to show its influence on GNP, the price level, unemployment, and the allocation of resources. Commercial banking and other financial institutions will be studied, as well as central banking. *Prerequisite: ECN 102. Note: counts towards the quantitative track.*

ECN 360 Industrial Organization (3 credits)

Applications of microeconomic theories to public policies affecting structure and performance of markets and behavior of firms. Antitrust and other aspects of government regulation will be covered.

Prerequisite: ECN 101.

ECN 365 Game Theory (3 credits)

The goal of the course is to introduce students to the field of Game Theory within the Microeconomics discipline. Standard concepts to be learned and discussed are the roles of strategy, decision making, solution concepts for games, the nature of Nash equilibria, strategic behavior, cooperation, the role of incentives, probabilities and the nature of Bayesian equilibria, auctions in theory and practice, matching theories, conflict and theories of appropriation versus production. The course will put a greater emphasis on the role of economic reasoning and the major results discovered within the field as opposed to understanding the complex mathematical proofs. In addition, students will learn to approach the study of economics from an analytic perspective as opposed to the standard quantitative approaches of undergraduate economic studies. *Prerequisite: ECN 101. Note: counts towards the quantitative track*

ECN 370 Economic Development (3 credits)

This course focuses on the economic growth and development of the Third World; conditions that are conducive to growth are explored and the transformation that results from growth is studied. Also addressed is the development impact on trade, poverty, industrialization, etc.

ECN 375 Environmental Economics

Introduces the environmental concerns facing optimal allocation of resources and factors of environmental policy. Topics include environmental policy analysis, externalities, public goods, criteria for evaluating environmental policies, the role of economic analysis in environmental policy decisions, discussion of pollution control planning, and economic analysis of environmental policy in United States and International Environmental issues.

Prerequisites: ECN101 or equivalent

ECN 390 The Economics of Health Care(3 credits)

This course examines major policy issues associated with the delivery of health care in the United States from an economic perspective. Particular emphasis will be placed on the challenges and trade-offs involved in containing health care costs, maintaining quality, and ensuring access. This course will provide students with a better understanding of the major health policy issues.

Prerequisite: ECN 101.

ECN 410 Econometrics (3 credits)

Basic principles of econometrics beginning with the classical linear regression model and the method of least squares. Special problems arising from the violation of classical assumptions, and statistical procedures for dealing with them, are covered. Identification and estimation problems are also studied, as well as forecasting with single-equation regression and simultaneous system of equations. Modern time-series models are evaluated, with numerous forecasting illustrations from economics and business. *Prerequisite: ECN 101, ECN 102, Introductory Statistics (MAT 118) or equivalent. Note: Required for quantitative track.*

ECN 415 Economic Forecasting (3 credits)

This course provides an introduction to forecasting techniques used frequently in economics and business. Students will review basic statistical concepts and then explore data patterns that are commonly found in a variety of economic settings. Central approaches to analyzing time-series data are covered, such as moving averages, smoothing methods, single and multivariate regression, Box-Jenkins (ARIMA) methodology, and others. *Prerequisite: ECN 101, ECN 102, Introductory statistics (MAT 118) or equivalent (ECN 410 or DSS 220 recommended. Note: counts towards the quantitative track.*

ECN 430 Modern Economic Systems (3 credits)

This course examines the nature of economic systems such as the market economy, the centrally planned economy and market socialism. It includes an assessment of how these systems have changed over time and compares the performance of each with respect to various economic indicators (such as GNP, employment, health care, etc.).

ECN 435 Evolution of Economics (3 credits)

The origin and development of the dominant ideas of modern economics investigated by study of a succession of major economists who shared in its making; the place of Economics in the history of ideas.

ECN 440 U.S. Economic History (3 credits)

Economic principles are used in an informal manner to assist in the interpretation of the history of U.S. economic development from colonial times to the recent past. Sociocultural factors are also noted as they relate to U.S. economic history.

ECN 445 Economics of Multinational Enterprises (3 credits)

This course will examine theories of foreign direct investment, initial investment strategies and organizational structure of multinational companies and their impact on the economies of both the host and home countries. It will also include the study of U.S. and host country policies toward multinationals and the business problems of firms operating in a foreign environment. *Prerequisite: ECN 101*

ECN 460 African Economies (3 credits)

Africa is a continent of contrasts. The poorest country in the world is in Africa and the world's highest rate of economic growth is also found in an African country. In this course, we will assess the economic performance of contemporary African countries and then we will analyze the reasons for their differing growth patterns. In the process, we will study what is produced, how it is produced and for whom it is produced. Satisfies Social Science GER.

ECN 475 Asian Economies (3 credits)

This course will encompass a theoretical and empirical approach to the study of the economies of Asia. First, the nature of the various economies will be assessed by the observation of some indicators of economic and social development. Then, theories will be explored that attempt to explain the differences in the economies and their growth patterns. This theoretical section will entail the study of international and indigenous characteristics of Asian countries. The aim of the course is to convey to students the changes in the world distribution of economic power and in the international division of labor as it involves the Asian countries, and the implications of these trends. *Prerequisite: ECN 101*

ECN 477 Chinese Economy

As the world becomes more integrated, countries become more interdependent. Economic events and policy changes in one country affect many other countries. The emergence of China, especially in international markets, is clearly one of the most important forces currently reshaping the world economy. Understanding China's history, culture, economics, politics and society is imperative to help students participate in the ongoing dialogue among policymakers, economists, business firms, and international agencies. This course will cover both the historical and current aspects of the Chinese economy with a focus on the historical

development of its socio-economic institutions, on its varying economic policies and strategies. In addition, this course would provide the student with opportunities to explore and apply economic theories and models to understanding the diverse processes of economic development in China.

ECN 480 Economics of Poverty and Income Inequality (3 credits)

In this course, we study several facets of income distribution and inequality in the United States through the lens of economic theory. Initially, we discuss the basics of income and wealth distribution (definitions and measurements), and study the trends and patterns of income, wealth and well-being, followed by a similar discussion with respect to poverty. The second portion of the course focuses on causes and explanations of poverty and income inequality. This section relies heavily on the foundation of labor economic theory with discussion of labor force participation, unemployment and human capital. Finally, we focus on policies that may cause or alleviate poverty and income inequality – both current and proposed policy – followed with a discussion of societal goals. If time permits, we also cover labor market discrimination and wage gaps, specifically with respect to race/ethnicity. This course is an upper-division Economics elective that also meets the Faith-Justice course studies criteria. *Prerequisite: ECN 101 (Principles of Microeconomics) or equivalent.*

ECN 485 Economics of Migration and Immigration (3 credits)

In this course, population movements are analyzed from the economics perspective. With respect to voluntary migration, we study both the macro issues (namely, the economic consequences of the loss and gain of population; the effect of globalization on labor markets) as well as the micro issues (such as who migrates and why). We study the different kinds of migrations that occur and the conditions that cause them to predominate. In the study of involuntary migration, we focus on the economic pressures used to force relocation. We also study the options open to displaced peoples, including encampments, repatriation, integration and third country asylum. Finally, we ask what happens to the economies of host countries when they are inundated with foreign migrants. Given that at this time, the majority of the annual migrants go to just four host countries: United States, Germany, Canada, and Australia, it is imperative to understand the effect of migration

on their economies and the concerns that underlie immigration policy. Satisfies Social Science GER.

ECN 490 Seminar in Economics (3 credits)

The process of developing and executing a research project according to the standards of modern economic science is the subject of this seminar. Attention is also given to the use of the computer as a research tool.

ECN 491 Philadelphia Economics Internship (3 credits)

This course combines work experience with academic study. Students work in unpaid internships for the duration of the semester (some 10 hours per week) with approved employers in the private and public sectors (or non-governmental and non-profit organizations) in the Philadelphia area. Their work experience is complemented with relevant required readings. In addition, students must keep a journal, write a final report and meet regularly with their adviser. A successful academic internship is a three-way partnership between the student, the employer, and the faculty adviser.

ECN 493 Independent Study in Economics

Students will study a topic in economics with a faculty mentor. *Prerequisite: Permission of the Instructor*

ECN 494 Honors Readings and Research in Economics (6 credits)

Taken in senior year under the direction of a thesis mentor.