ECON2231 Financial Forecasting  Richard McGowan, S.J.

Prerequisites: ECON1151, MATH1100
Course is open only to economics majors, economics minors, and CSOM economic concentrators.
The theory and practice of applied time series analysis will be explored. First the different segments (trend, seasonality, cyclical, and irregular) of a time series will be analyzed by examining the Autocorrelation functions (ACF) and Partial Autocorrelation functions (PACF). The specifics model to model the various types of time series include linear regression, panel regression, seasonal decomposition, exponential smoothing, ARIMA modeling as well as combining models. This course is offered as an online hybrid course. In addition to the online lectures presented on the Canvas LMS, there are three required on-campus class meetings on Saturday mornings. Please see the course syllabus for additional details.

ECON2242 Public Policy in an Aging Society  Matthew Rutledge

Prerequisites: ECON1131 or ECON1101
We live in a rapidly aging nation. In two decades, the age distribution of the US will look like that of Florida today. We will analyze the underlying demographic trends, the economic status of the aged, the fiscal challenge of an aging society, public policies (especially social insurance) designed to assist older Americans, the impact of public policy on individual behavior, and proposals for reform.

ECON2246 Impact of News on Financial Markets  Hossein Kazemi

Prerequisites: ECON1131 or ECON1101
The impact of news on financial markets is examined in this course. More specifically, this course studies how Central Banks and Financial Markets react to economic and financial news. Using tools of economics and finance, the impact of macroeconomic data releases, business and financial news, as well as domestic and global political news on the financial markets will be measured and evaluated in this course. It further examines how the markets, including bonds, equities, commodities and foreign exchange markets, react to the news.

ECON2277 Environmental Economics and Policy  Richard Sweeney

Prerequisites: ECON1131 or ECON1101
This course provides an introduction to the economics of environmental policy. We begin by examining market failures from externalities and public goods. We then discuss public policy options to correct these failures, and develop tools to assess the costs and benefits of each approach. With this framework in place, the remainder of the course is spent evaluating past efforts to conserve land and improve air and water quality, before concluding with an extensive discussion about global climate change policy.

#Enrollment limited; significant writing/research component.
+Fulfills cultural diversity core requirement.
For up-to-date information on Economics course offerings, please see http://www.bc.edu/economics
ECON2278 Environmental Economics

Prerequisites: ECON1131 or ECON1101

The course will examine different aspects of natural resource allocation and the protection of environmental quality from an economic standpoint, including: specific areas of market failure, the allocation of public goods, the estimation of non-market values, public policy avenues for influencing natural resource management, and ethical issues in natural resource management.

Upper Level Electives

ECON3301 Topics in Macroeconomic Forecasting

Prerequisites: ECON2202 or ECON2204

Forecasting is a very important activity. Economists forecast the macroeconomy and these forecasts provide information that will help the economy to thrive. Business firms must also forecast the macroeconomy. All of the problems covered in this course can be set up as special cases of a state-space model. This course is devoted to forecasting the macroeconomy. Topics that will be covered in this course are: single equation ARMA processes; linear algebra, Vector autoregressions (VARs); state-space models; using state-space models to forecast the economy when the state variables are observed; errors-in-variables; dynamic factor models; using state-space models when the state variables are unobserved, that is using dynamic factor models; dynamic factor models applied to several different macroeconomic models from the literature.

ECON3305 Market Design

Prerequisites: ECON2201 or ECON2203, ECON1151

This is an advanced course on market design. The course aims to provide students with theoretical concepts of matching and allocation problems. The focus of the course is both introducing students to market-design theory as well as exploring real-life applications such as on-campus housing, school choice, kidney exchange, search engine auctions, and spectrum auctions. Some knowledge of statistics, especially order statistics, and calculus is required for the theoretical part. Students will be required to write a final paper and do an in-class presentation.

ECON3308 Game Theory in Economics

Prerequisites: ECON2201 or ECON2203

This course is an introduction to game theory. Game theory consists of a coherent set of concepts and analytical tools to examine interactive or strategic situations between people, that is, situations where the well being of one actor depends not only what s/he does but also on what others do. Hence in deciding how best to act, each person needs to consider how others are likely to act as well. Game theory has become a widely used tool of analysis in a wide range of disciplines, including economics, business, political science, law, and international relations.

ECON3313 Economics of Information

Prerequisites: ECON2201 or ECON2203

In some economic situations, agents do not have all the information they need to make a decision, hence they need to decide under uncertainty. Furthermore, some agents may have better information than others. These information asymmetries have important effects in economic environments and institutions. Some examples are hiring and employment, business contracts, insurance, property rights, entrepreneurship. This course aims to cover a series of related models that help us deeply understand and analyze these special decision-making environments. The following topics will be covered extensively: expected utility theory, theory of incentives and contracts, moral hazard, adverse selection, signaling.

#Enrollment limited; significant writing/research component.
+Fulfills cultural diversity core requirement.
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ECON3317 Economics of Inequality  Geoffrey Sanzenbacher
*Prerequisites: ECON2201 or ECON2203, ECON2228*
The course will provide both a theoretical and empirical analysis of economic inequality. This will include analysis and discussion of recent trends in inequality and an examination of the economic causes and consequences of inequality. Specific attention will be paid to the difference between inequality of economic outcomes (e.g., employment status, earnings, and occupation) and inequality of economic opportunity. The course will also touch on economic policy, including discussions of programs designed to combat inequality of outcomes, like welfare and food stamps, as well as those designed to combat inequality of opportunity, like Head Start.

ECON3324 Money and Financial Markets  Hossein Kazemi
*Prerequisites: ECON2202 or ECON2204, ECON2228*
**Not open to students who have completed ECON3361.** This course covers topics such as the significance and multiple functions of money in the economy, the behavior of interest rates, the banking system, financial markets, and the management of financial institutions. This course further covers the Federal Reserve System and the conduct of monetary policy, different asset classes, the foreign exchange market, and the international financial system. There is a heavy emphasis on use of market data and the analysis of economic releases-earnings reports, government policy statements, etc.-to provide a comprehensive introduction to the subject. Moreover, through an extensive use of Bloomberg in this class students learn how to access and analyze data and economic releases to provide a window into how modern practitioners in the discipline analyze financial markets.

ECON3340# Labor Economics  Mark Kazarosian
*Prerequisites: ECON2201 or ECON2203, ECON2228*
This course will introduce students to the methodology of labor economics from both institutional and neoclassical perspectives. The principal emphasis will be on neoclassical theory and empirical work dealing with the supply and demand for labor; the operation of the labor market; the determination of wages; and the impact of trade unions and collective bargaining. Special emphasis will be placed on applications of theory and empirical findings to policy questions. It is highly recommended that students have a strong grasp of Calculus.

ECON3353 Industrial Organization –Competition and Antitrust  Charles Murry
*Prerequisites: ECON2201 or ECON2203*
This course is an economic analysis of market outcomes when firms are imperfectly competitive. We will consider the consequences of imperfect competition on market performance. We will analyze such issues as oligopoly behavior, collusion, mergers and takeovers, advertising, product differentiation, price discrimination, entry and entry deterrence, innovation and patents, and antitrust law.

ECON3354# Advertising and Media Markets: Advance Research Methods  Julie Mortimer
*Prerequisites: ECON2201 or ECON2203, ECON1151, ECON2228 (can be taken concurrently)*
Extensive research project. This course develops advanced research methods to study the advertising and media markets. The goal of the course is to provide hands-on experience with advanced research methods, including the ability to analyze and critique previous research and to identify important research questions. The course is designed primarily for junior economics majors who are interested in writing a senior thesis, or for junior and senior economics majors anticipating quantitative work in economics or marketing after graduation. Methods that are taught include theoretical tools from industrial organization, such as game theoretic models of imperfect competition, pricing, and entry, as well as statistical and empirical methods of analysis using data on advertising and media programming choices. Questions addressed in the course include the following: What is the impact of advertising on product markets? How do advertisers compete for air time, both across and within industries?

#Enrollment limited; significant writing/research component.
+Fulfills cultural diversity core requirement.
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ECON3363# Micro Public Policy Issues  
Joseph Quinn  
Prerequisites: ECON2201 or ECON2203  
This is a seminar on the economic analysis of current microeconomic public policy issues. During the first half of the course, students will read and discuss articles on selected topics (from the syllabus), and prepare first drafts of papers on topics of their own choice. The second half of the course will be run like a professional economics conference. Students will read and critique others' papers, present their own drafts to the class, and then revise their own papers on the basis of the comments received.

ECON3365 Public Finance  
Mark Kazarosian / Christopher McHugh  
Prerequisites: ECON2201 or ECON2203 and ECON2228  
This is a course in the microeconomics of the public sector. We will discuss the rationale for the government's role in a market economy, major expenditure programs, and the theory and structure of the tax system. The focus will be on the federal (as opposed to state and local) government's expenditure and tax programs, with special attention given to topics of current concern.

ECON3370 Topics in Applied Econometrics  
Christopher Maxwell  
Prerequisites: ECON2228  
This is an advanced econometrics/data analytics course and extends ECON2228. Selected topics include linear and non-linear least squares estimation as well as maximum likelihood estimation, including logit/probit, ordered logit/probit and poisson/negative binomial count regression models. A term-long research project is an important part of the course and will entail in-class presentations as well as a submission at the end of the semester. The analytics in the course will be Stata-based, but students in doing their own work, should feel free to work in R, SAS, Python, or whatever their statistical language of choice might be. Examples and datasets are drawn entirely from the sports world. Limited enrollment.

ECON3371 International Trade  
Christopher McHugh  
Prerequisites: ECON2201 or ECON2203  
International Trade is the microeconomic analysis of international economics. Models include comparative advantage, the specific factors model, Heckscher-Ohlin theory and factor-price equalization. Analyses of tariffs, export subsidies, quotas, local content laws, government aid to industries and other forms of protectionism. Also, the New Trade Theory, which involves economies of scale, imperfect competition, economic geography and location theory. History including GATT, the World Trade Organization and NAFTA, and current topics such as outsourcing, competitive advantage, multinational corporations, transfer pricing and taxation of multinationals.

ECON3372 International Finance  
Brian Bethune  
Prerequisites: ECON2202 or ECON2204, ECON2228  
International financial markets, international trade and balance of payments issues will be studied by using analytical models of the open economy. Topics of particular interests are exchange rate determination, capital flows, trade flows, and other international linkages between economies. The course will apply the analytical tools of international economics to address macroeconomic aspects of current policy issues such as the global impact of the financial crisis, exchange rate policy, sovereign debt crises, and persistent trade deficits and international indebtedness.

#Enrollment limited; significant writing/research component.  
+Fulfills cultural diversity core requirement.  
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ECON3373# Impact Evaluation in Developing Countries  
Paul Cichello

Prerequisites: ECON2201 or ECON2203, ECON2228
Enrollment limited; significant writing/research component.

This course reviews advanced econometric techniques and research designs used to estimate the causal effect of programs or policies implemented in developing countries. Fixed effects, difference-in-difference, instrumental variable, and propensity score methods are discussed as are regression discontinuity, natural experiment, and randomized experiment designs. The economic rationale for such programs is also addressed. Topic areas include health, education, service delivery, insurance, and microfinance.

ECON3382 Introduction to Computational Investing  
Tzuo Law

In this course, students develop skills to automate an investment strategy. The first third of the course covers programming skills (Python), market structure, and portfolio evaluation. The second third covers optimization and commonly used strategies. In the final third, we cross-evaluate student projects and discuss theory behind applications. Students work on a group project after the first third of the course. By the end of the course, successful students are able to write and evaluate fully functional programs on an online trading platform. Please show up in class if you are interested but cannot register or do not meet the requirements. Traditionally, all interested students have been able to eventually register. This is not a course that promotes quantitative investing. It is an immersion to acquire the universally useful skills required to automate investments. The lab session is mandatory. Juniors encouraged to enroll.

ECON3389 Machine Learning for Economics  
Haydar Evren

Prerequisites: ECON1151

Large scale data sets ("big data") become ubiquitous across many applied areas. The goal of this course is to provide an introduction to methods that allow to deal with this situation. We focus on statistical learning techniques and high-dimensional statistics, and show how they can be applied in economics and business administration.

#Enrollment limited; significant writing/research component.
+Fulfills cultural diversity core requirement.
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