ECON2206/BSLW2206 Real Estate and Urban Action  Neil McCullagh
The only prerequisite is an interest in any facet of real estate and urban action. Given the multidisciplinary tasks required to create viable communities, students from all schools at Boston College are welcomed to participate.
Real Estate and Urban Action is a class in which students explore the interdisciplinary fields that are engaged in neighborhood revitalization. The course uses the transformation of the failed Columbia Point housing project (Dorchester, MA) into Harbor Point, a successful mixed income neighborhood, as a core teaching case study, highlighting how successful redevelopment addresses the social and economic needs of community residents. Classes include guest lectures from developers, public planning officials, and supportive services experts on the social, cultural, and political factors critical to transforming distressed neighborhoods into safe and economically viable neighborhoods. It is a practical course, in which students gain experience through field trips and interactions with real estate and supportive services professionals, culminating in a team neighborhood transformation proposal. Seating limited for economics students.

ECON2208 Economic Justice  Fr. John Piderit
Prerequisites: ECON1101
The normal focus of economics is on efficiency in the development and use of scarce resources as well as the determination of rewards paid to factors of production such as labor and capital. In some economics courses attention is given to a country's distribution of income, although usually without any economic or philosophical justification for what constitutes a fair distribution of income. This course identifies guiding principles that are rooted in a vibrant Judeo-Christian tradition stemming from the Old and New Testament. These principles constitute the foundation for general norms that help identify components of the common good of a society and that guide the distribution of goods among individual nation states, between generations, and between people of one century with people of future centuries. They also suggest how to balance rewards for people or firms that develop new products, and they yield broad boundaries within which economies should function to protect the environment. Finally, any just society requires much more than free markets and a system of law and governance. The course proposes an ethical code for workers in free-market societies, a code based on making sure that all people have reasonable economic resources to pursue basic human goods in their personal and community lives.

ECON2211 Math for Economic Analysis  Bruce Watson
Prerequisites: ECON1101
Assuming only high school algebra, the course develops all of the main mathematical tools used in modern economics. Students will learn the skills necessary to do well in subsequent economics courses, such as Micro Theory (ECON2201) and Macro Theory (ECON2202), as well as advanced electives, such as Game Theory in Economics (ECON3308) and Financial Economics (ECON3379). Those who have completed Multivariate Calculus (MATH2202) or ECON2201 should not take this course. Beginning with applications of standard algebra to economics, the course looks at partial and general equilibrium and comparative statics. Topics subsequently explored include introductory linear algebra (matrices and vectors), and applications of univariate (single-variable) calculus to economics. Multivariate calculus is covered next, with applications to consumer theory and the theory of the firm. Finally, unconstrained and constrained optimization is covered, including techniques such as the Lagrange multiplier and Jacobian.

#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
matrices. Applications and examples are drawn from practical problems in economics and business. Throughout the course, an emphasis is placed on combining intuition with rigor—the math is used to provide a more rigorous analysis of the intuitive understanding students acquired in their principles of economics courses.

ECON2212/ISYS6625 Geographic Info Systems for Planning and Decisions  Will Cohen
Prerequisites: ECON1101
Large quantities of information are available to describe our social and physical environment with high detail, but making sense of this data requires specialized skill sets. Geographic Information Systems (GIS) is a general approach to analysis and is a powerful set of tools for understanding complex problems or for making a compelling argument about issues grounded in the physical or social environment. It is widely used in the public and private sectors. This course will introduce students to the use of GIS and representation as a means of looking at and representing spatial data. Students will learn how to perform the three broad steps of spatial analysis: 1) collecting and organizing data, 2) analyzing this data for appropriate patterns, and 3) using software to represent data on maps to support decision making.

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  Joe Quinn
Prerequisites: 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.

ECON2273+ Development Economics  Valeria Ferraro
Prerequisites: ECON1101, ECON1151
This course considers what we know about developing countries, and applies economic theory to help us understand the constraints of poverty. We will describe the economies of less developed countries and the lives of the poor, focusing on changes in poverty, inequality, demography, and health. We will consider theories and evidence for why some countries are rich and others poor. We will examine how land, labor, and credit markets function in poor countries and communities, and the consequences for health, education, and child labor. We will consider migration and its consequences and will discuss aid and international institutions. Satisfies Core requirement for: Cultural Diversity

ECON2875 Development and Social Justice in Korea  Ingu Hwang
Prerequisites: ECON1101
This course introduces students to the political and economic changes that South Korea experienced from the 1960s to the present and explores how these changes contributed to social unrest, to demands for greater democracy, and to other social justice issues. In doing so, it will address how South Korea's economic and

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political trajectory was informed by pressures at the international, national, and sub-national level and compare the South Korean case to that of other Asian nations. Students who previously took INTL287101, Industrialization and Democratization, Korea WILL NOT be able to take this course.

**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.

**ECON3303 Economics of the Family**

*Prerequisites: ECON2201 or ECON2203, ECON2228*

This course uses economic tools to explore decision-making and allocation of resources within the family. The impact of gender roles and differences will be examined historically in the US and across developed economies. Student participation will be an integral part of the course. During class, students will be required to evaluate data and relate it to the theoretical model covered. Student participation will also include two in-class oral presentations.

**ECON3305 Market Design**

*Prerequisites: ECON2201 or ECON2203, ECON1151*

This is an introductory-level course on market design. It aims to provide students with fundamental concepts of matching and allocation problems without money as well as auctions. The focus of the course is both introducing students to the 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 and calculus is required for the theoretical part. Students will be required to write a final paper and do an in-class presentation.

**ECON3306 Economics of Education**

*Prerequisites: ECON2201 or ECON2203, ECON2228*

This course combines economic theory, econometric literature, and institutional literature to examine current issues in U.S. education. Topics include: The basic theory of investments in education (human capital theory); disentangling the return to education from the return to innate ability; the role of education in individual mobility and national economic growth; the association between education and individual earnings and reasons why that relationship has changed over time; the role of early childhood education; the main approaches to K-12 school reform (money, choice, educational standards, and teacher selection/training); higher education and higher education policy. We will also discuss teacher assessment methods, computers in education, and the effectiveness of different teaching methods.
ECON3308 Game Theory in Economics
Tayfun Sonmez/Vera Sharunova
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.

ECON3312 Evolutionary Economics
Donald Cox
Prerequisites: ECON2201 or ECON2203, ECON2228
The course uses evolutionary biology to better understand the psychology of preferences, a central concept in economics. Why are people risk averse? Impatient? What explains novelty-seeking habits, addictions? What makes parents provide for children? We will use evolutionary thinking to explore these and a host of other diverse topics: violence, adolescent risk taking, sexual behavior, mating preferences, marriage and divorce, rearing and investing in children, extended families, trade and specialization, cooperation and conflict, cults and gangs, religion, and interactions between genetic and cultural forces. This course has an intensive research and writing requirement and enrollment is limited. Prerequisites: Micro theory and econometrics. You should be comfortable using Stata.

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.

ECON3325 Contest Theory
Dimitar Simeonov
Prerequisites: ECON2201 or ECON2203
Many economic, political, and social environments can be described as contests in which competing agents have the opportunity to expend scarce resources--such as effort, money, time, or troops--in order to affect the probabilities of winning prizes. Examples range from the competition for patents and promotions within firms, to the process of litigation or lobbying politicians, to elections, sports competitions, and global conflicts. Such environments have been analyzed using Tullock contests, all-pay auctions, and rank-order
tournaments. The course will cover both theoretical models and experimental papers testing predictions from the models.

**ECON3326 Experimental Economics**
*Prerequisites: ECON2201 or ECON2203*

Lucas Coffman

This course is for anyone who wants to be able to answer questions using experiments. This course is an introduction to experimental methods, particularly those developed by economists. We will discuss in detail all of the steps of an experiment, from design, measurement and randomization, to cost and power analyses. This is strictly a methods course; the experiments we discuss are chosen to give a broad understanding of experimental methods, not a foundation of famous experimental results. Nonetheless, we will cover experiments in a variety of interesting fields: behavioral economics, economics of developing countries, discrimination, labor economics, cognitive and social psychology, and more. There are two main value-adds from this course. First, you will be equipped to design and run an experiment to answer important questions. Second, in understanding what the optimal experimental design should look like, you will be armed with better lenses through which to view naturally existing data.

**ECON3327 Financial Econometrics**
*Prerequisites: ECON2228, MATH1100*

Geoffrey Sanzenbacher

This course extends ECON2228 to present panel data models, selected topics in time series analysis, and limited dependent variable models. Methods used in financial econometrics, such as rolling CAPM estimation, volatility estimation, and event studies will be stressed. Examples and datasets are drawn from financial economics.

**ECON3338 Law and Economics**
*Prerequisites: ECON2201 or ECON2203*

Andrew Copland

In this course we utilize microeconomic analysis to evaluate the “performance” of legal institutions, with particular attention to the issue of economic efficiency. We will focus on questions in the common law fields of property, torts, and contracts (and in the theory and practice of criminal law if time permits).

**ECON3340# Labor Economics**
*Prerequisites: ECON2201 or ECON2203, ECON2228*

Mark Kazarosian

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.

**ECON3361 Monetary Theory & Policy**
*Prerequisites: ECON2202 or ECON2204, ECON2228*

Hossein Kazemi

This course is an analysis of how the operation and behavior of financial markets are influenced by monetary policy, the actions taken by the Federal Reserve (the Fed) to promote full employment, price stability, and moderate long-term interest rates. Emphasis is placed on studying the interaction between financial intermediaries (e.g. commercial banks, investment banks, mutual funds, hedge funds, etc.) and a nation’s central bank. Students are introduced to the modern theories of the demand for and supply of money, as well as their implications for economic activity, the cost of living, employment, and the conduct of monetary policy. Particular emphasis is given to recent Fed policy, including Quantitative Easing and Quantitative Tightening and the impact of these policies on asset prices and long-term interest rates. Furthermore, through an extensive use of Bloomberg in this class students learn how to analyze the impact of these and other Fed policies on the U.S. economy and financial markets to provide a window into how
modern practitioners in the discipline follow and respond to changes in U.S. monetary policy.

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, may be taken concurrently  
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 Econometrics  
C. 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 study of international economics. It is an overview of the world economy and trade patterns and flows. Theories and models include comparative advantage, gains from trade, specific factors model, Heckscher-Ohlin, the “Standard Trade Model” and the “New Trade Theory.” Sub-topics include economies of scale, imperfect competition and economic geography and location theory. International trade also covers the issues of multinational corporations and the political economy of trade and its history.

ECON3372 International Finance  
Rosen Valchev  
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.

ECON3375 Stone Tools/Robots: Economic Growth & Development  
Pablo Guerron  
Prerequisites: ECON 1151, ECON2202 or ECON2204  
This class explores economic growth over the past millennia. For most of its history, humanity did not experience the type and quality of life, as we know it today (e.g., electricity, running water, medicine, telecommunications, and transport). It is only during the second half of the 18th century when Europe (and

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later U.S.) started to see economic growth. This growth started with the Industrial Revolution. In the first part of the course, we will study models that explain why economic growth is such a recent phenomenon. We will rely on models such as those proposed by Malthus to understand why the world did not grow at all for most of 5 millennia. We will also explore models that help us to understand the explosive economic growth experienced by the U.S. in the 19th and 20th centuries (and other countries more recently). As a by-product, there will be some discussion on the recent slowdown affecting most Western economies (the so-called Secular Stagnation). Importantly, we will talk about the increasingly reliance on automation for production in the so-called 4th Industrial Revolution. That is, the impact automation may have on employment, welfare, and society. For example, we will explore how automation is contributing to inequality.

A crucial part of the course is to understand how research and development (R&D) and innovation contribute to growth. Therefore, the second part of the course will be devoted to study R&D at the aggregate (macro) level but also at the industry level. We will use case studies in, for example, the pharmaceutical sector to study why R&D is such a crucial factor for growth but also difficult to implement and predict its impact on firms and ultimately on the economy. We will study the current development of vaccines and treatments for Covid-19. In addition, we also analyze the role of automation and big data (data mining, and machine learning) in R&D.

As will become clear, programming is a vital skill in the 4th Industrial Revolution. To prepare students for this shifting labor landscape, students will learn Python to manipulate data and solve models. An example of this is to compute productivity using data from national accounts for different countries.

ECON3379 Financial Economics  
**Peter Ireland**  
*Prerequisites: ECON2201 or ECON2203; ECON2228*  
This undergraduate elective focuses on financial economics, with specific emphasis on asset pricing and the valuation of risky cash flows. After developing and studying the details of consumer decision-making under uncertainty, it uses that general framework as a basis for understanding both equilibrium and no-arbitrage theories of securities pricing, including the capital asset pricing model (CAPM), the consumption capital asset pricing model (CCAPM), Arrow-Debreu theories, martingale pricing methods, and the arbitrage pricing theory (APT).

ECON3389 Machine Learning for Economics  
**Anatoly Arlashin/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.

ECON3391 Economics of Energy and the Environment  
**Richard Sweeney**  
*Prerequisites: ECON2201 or ECON2203; ECON2228*  
This course provides an overview of recent research in energy and environmental economics, with an emphasis on connecting policy questions of interest to available data and econometric methods. In the context of specific markets, we will first review the theoretical justifications for government intervention. We will then turn to the empirical evidence to see what recent economic scholarship has to say about a variety of energy policy questions, including: Should we ban fracking? Do oil pipelines reduce property values? What is the best way to promote renewable energy? Should we be more energy efficient? Students will be required to read and discuss academic articles each week, as well as write an empirical term paper.