ECONOMICS

1019 Milstein Learning Center
212-854-3454
Department Administrator: Regina Roberts

Mission

The primary aim of the Barnard Economics Department is to provide undergraduate liberal arts students with a rigorous, broad, and critical program in theoretical and empirical economics. To achieve this aim our curriculum

- Provides a thorough grounding in neoclassical economic theory, modern statistical method, and their applications in the traditional fields of economic science;
- Embeds that training in a broader conception of economic science and method with special emphasis on philosophical, historical, and institutional approaches that link economics with other social sciences and humanistic disciplines;
- Compares and contrasts alternative methodological approaches and types of evidence as ways of analyzing economic phenomena, evaluating policy debates, and assessing the broader social and political consequences of economic doctrines.

Student Learning Outcomes for the Economics Major, Economics and Political Economy Tracks

Having successfully completed the major in Economics, the student will be able to attain the following outcomes:

1. Show fluency in the basic concepts, models and tools of microeconomic and macroeconomic theory;
2. Think critically about economic phenomena and economic debates by using multiple kinds of texts, evidence and conceptual approaches;
3. Apply economic reasoning to understand the causal determinants of economic events, empirical regularities, and policy proposals;
4. Apply basic skills of empirical reasoning to economic problems;
5. Demonstrate knowledge of the history of economic thought, including important doctrines, their historical context, transformation over time, and influence on contemporary economic theory and ideas;
6. Demonstrate understanding of institutions, organizations and markets in their roles of coordinating economic activity;
7. Demonstrate knowledge of the historical origins of capitalism, modern economic growth and development, patterns of inequality, and globalization;
8. Articulate a well-defined research question and conduct independent research using economic reasoning and evidence;
9. Communicate economic ideas effectively in written or oral form.

Specific to the Economics Track

1. Understand and apply statistical techniques to make inferences about economic hypotheses.

Specific to the Political Economy Track

1. Use concepts or methods from at least one disciplinary approach other than economics to analyze an economic, political or other social problem.

Barnard will allow a total of 3 points AP credit in Economics only if the following conditions are satisfied: an AP score of 4 or 5 in either Macro or Micro (or both), or an International Baccalaureate (IB) score of 5 or higher. However, students who receive AP credit for economics and who go on to pursue any of the economics department majors (or an economics minor) must still take ECON BC1003   or its equivalent. For Statistics, Barnard will allow 3 points credit with a score of 5 on the Statistics AP exam. Economics track majors, however, will not be exempt from the statistics requirement ECON BC2411 Statistics for Economics or the equivalent, even if they receive 3 points AP credit for Statistics.

Chair: Randall Reback (Professor)
Professors: Elizabeth Ananat (Mallya Professor of Women and Economics), André Burgstaller, Alan Dye, Daniel Hamermesh (Distinguished Scholar), Sharon Harrison, Lalith Munasinghe, Rajiv Sethi, David Weiman (Alena Wels Hirschorn '58 Professor)
Associate Professors: Ashley Timmer (Adjunct), Homa Zarghamee
Assistant Professors: Belinda Archibong, Martina Jasova, Sonia Pereira (Adjunct), Rena Rosenberg (Adjunct), Elham Saeidinezhad (Term), Anja Tolonen
Adjunct Associate: John Park

Other officers of the University offering courses listed below:

Professors: Alessandra Casella, Yeon-Koo Che, Pierre-Andre Chiappori, Graciela Chichilnisky, Donald Davis, Prajit Dutta, Harrison Hong, Wojciech Kopczuk, Serena Ng, Brendan O'Flaherty, Xavier Sala-i-Martin, Bernard Salanie, Stephanie Schmitt-Grohe, Martin Uribe, Michael Woodford, David Weinstein
Associate Professor: Lena Edlund, Qingmin Liu
Assistant Professors: Michael Best, Andres Drenik, Jack Willis
Lecturers: Irasema Alonso, Tri Vi Dang, Ceyhun Elgin, Susan Elmes, Seyhan Erden, Tamrat Gashaw, Sunil Gulati, Ronald Miller, Wouter Vergote

Requirements for the Major

There are two tracks for the major in Economics equal in rigor, but different in scope and focus. The track in Economics emphasizes modern economic theory along with associated analytical and mathematical tools. The track in Political Economy emphasizes the roots of modern economics in the history of economic thought and the interconnections between social forces, political institutions, and economic power. Either track offers excellent preparation for graduate study in a variety of professional schools and professional careers in many areas, including business and public administration.

Prospective majors should discuss their programs with any member of the department no later than the second semester of their sophomore year. At the time of declaring the major, the student meets with the department chair and chooses a major adviser, who will advise her on the choice of program and courses. Students planning to major in Economics or Political Economy should complete both intermediate macro- and microeconomic theory by the beginning of their junior year.

Students who wish to complete a double or joint major that includes Economics should consult the chair of the department or the major adviser as early as possible. Students interested in pursuing a Ph.D. in economics should take more mathematics than required for the economics major or choose the Economics and Mathematics interdisciplinary major. Any interested student should seek guidance

from the Economics and/or Mathematics faculty on which mathematics courses to take.

All majors should file the "Major Requirements Declaration" form, available from the department office by the end of their sophomore year, or as soon as possible thereafter.

Economics

The Economics track requires a minimum of 12 courses (36 minimum credits).

ECON BC1003		3
ECON BC1007 or MATH UN1201	Mathematical Methods for Economics * Calculus III	4
ECON BC2411 or STAT UN1101 or STAT UN1201 or PSYC BC1101	Statistics for Economics Introduction to Statistics Calculus-Based Introduction to Statistics Statistics	4
ECON BC3018	Econometrics	4
ECON BC3033	Intermediate Macroeconomic Theory	4
ECON BC3035	Intermediate Microeconomic Theory	4
ECON BC3041	Theoretical Foundations of Political Economy	3
Three electives in economics, two of which must be upper-level (that is, they must have intermediate micro- or macroeconomic theory as a prerequisite).		
One of the following two options:		
ECON BC3061 - ECON BC3062	Senior Thesis I and Senior Thesis II	
ECON BC3063	Senior Seminar (and an additional upper-level elective in economics)	

* Students will not receive credit for ECON BC1007 Mathematical Methods for Economics if they have already taken ECON BC3035 Intermediate Microeconomic Theory. Such students must instead complete the mathematics requirement by taking MATH UN1201 Calculus III (Calculus III).

Political Economy

The Political Economy track major requires a minimum of 13 courses (42 minimum credits).

ECON BC1003		3
ECON BC1007 or MATH UN1101	Mathematical Methods for Economics Calculus I	4
ECON BC3033	Intermediate Macroeconomic Theory	4
ECON BC3035	Intermediate Microeconomic Theory	4
ECON BC3041	Theoretical Foundations of Political Economy	3
ECON BC2411 or STAT UN1101 or STAT UN1201 or PSYC BC1101	Statistics for Economics Introduction to Statistics Calculus-Based Introduction to Statistics Statistics	4
Three electives in economics, two of which must be upper-level electives (that is, they must have intermediate micro- or macroeconomic theory as a prerequisite)		
Two interdisciplinary electives (see further conditions below)		
And one of the following two options:		
ECON BC3061 - ECON BC3062	Senior Thesis I and Senior Thesis II	

ECON BC3063	Senior Seminar (and an additional upper-level elective in economics)	

Interdisciplinary Electives

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[NOTE: Statistics is required for Political Economy track majors in the class of 2021 and later. It replaces one of the three interdisciplinary electives formerly required for the class of 2020 and earlier.]

Linking interdisciplinary electives to economics electives: If a course is "linked," this means that it addresses subject matter that is related to the subject matter of the economics elective to which it is paired. There are many possible ways to link a course to an economics elective. A link to some suggestions from the department website is given below. Whether a course qualifies as a linked course must be approved by the student's major adviser.

Related Areas of Study

Departments
- Anthropology
- Asian and Middle Eastern Cultures
- Environmental Science
- History
- Philosophy
- Political Science
- Psychology
- Sociology
- Spanish and Latin American Cultures
- Women's Studies

Regional or Interdisciplinary Programs
- Africana Studies
- American Studies
- Human Rights Studies
- Jewish Studies
- Science and Public Policy
- Urban Studies

Suggestions for Linking Interdisciplinary Electives to Economics Electives

Follow this link for a list of suggestions for Interdisciplinary Electives that link to Economics Elective Courses. It is NOT an exhaustive list. You should feel free to propose alternative courses that form similar links. All linked courses must be approved by the student's major adviser.

Mathematics Training for the Major

The department expects all majors to have a working knowledge of arithmetic, high school algebra, and the fundamentals of analytic geometry.

Majors in the economics track may complete the mathematics requirement by taking ECON BC1007 Mathematical Methods for Economics, or MATH UN1101 Calculus I and MATH UN1201 Calculus III. Students who have received advanced placement credit or have placed out of Calculus I may take either Math Methods or Calculus III to complete the requirement. (Students with 5 on the Calculus BC test may begin with Calculus III.)

Majors in the political economy track may complete the mathematics requirement by taking ECON BC1007 Mathematical Methods for Economics or MATH UN1101 Calculus I. Students who have received advanced placement college credit for calculus have satisfied the mathematics requirement for the political economy track, however they must take an additional economics elective as a substitute for the AP credit so that the total number of courses taken for the major remains the same.

Students interested in pursuing a Ph.D. in economics should take more mathematics than required for the economics major or choose the Economics and Mathematics interdisciplinary major. Any interested student should seek guidance from the Economics and/or Mathematics faculty on which mathematics courses to take.

Requirements for the Minor

The minor in economics consists of five courses, including ECON BC1003 or equivalent, ECON BC3033 Intermediate Macroeconomic Theory or ECON BC3035 Intermediate Microeconomic Theory, and three electives, one of which must have an intermediate micro- or macroeconomic theory course as a prerequisite.

Introductory Courses

The principles of economics; may be taken without previous study of economics.

ECON BC1007 Mathematical Methods for Economics. *4 points*.
BC: Fulfillment of General Education Requirement: Quantitative and Deductive Reasoning (QUA).

Covers basic mathematical methods required for intermediate theory courses and upper level electives in economics, with a strong emphasis on applications. Topics include simultaneous equations, functions, partial differentiation, optimization of functions of more than one variable, constrained optimization, and financial mathematics. *This course satisfies the Calculus requirement for the Economics major. NOTE: students who have previously taken Intermediate Micro Theory (ECON BC3035 or the equivalent) are *not* allowed to take Math Methods for Economics.*

General Courses

May be taken with minimal previous study of economics.

ECON BC2020 Introduction to Development Economics. *3 points*.
BC: Fulfillment of General Education Requirement: Social Analysis (SOC II).

Students will be introduced to current issues within development economics, and to fundamental economic concepts explaining economic growth. It will discuss the crosscutting themes of gender equality and environmental sustainability, while approaching topics within economic growth, population growth, human capital, health, agriculture, urbanization, natural resources, conflict, and institutions.

ECON UN2029 FED Challenge Workshop. *1 point*.
Prerequisites: *ECON W1105*.
The workshop prepares students to compete in the annual College Fed Challenge sponsored by the Federal Reserve. Topics covered include macroeconomic and financial conditions, monetary policy, financial stability and the Federal Reserve System.

ECON BC2075 Logic and Limits of Economic Justice. *3 points*.
BC: Fulfillment of General Education Requirement: Ethics and Values.

Prerequisites: Introduction to Economic Reasoning (ECON BC 1003) or Principles of Economics (ECON W1105). An introductory course in political theory or political philosophy is strongly recommended, but not required.
Introduce students to problems of economic justice under capitalism.
  Course has three goals: (1) expose students to debates between economics and philosophers about the meaning and nature of justice, (2) explore conflict between efficiency and justice, (3) examine implications of justice for gender equality, intergenerational equity and climate change.

STEM BC2223 Computer Programming for the Behavioral Sciences. *4 points*.
BC: Fulfillment of General Education Requirement: Quantitative and Deductive Reasoning (QUA).

Students will learn how to write computer programs that can test theories and predictions that arise in the behavioral sciences. For students with little or no programming background.

ECHS BC2590 Measuring History: Empirical Approaches to Economic and Social History. *4 points*.
BC: Fulfillment of General Education Requirement: Social Analysis (SOC I)., BC: Fulfillment of General Education Requirement: Social Analysis (SOC II).

This course examines big themes in economic and social history-population history and human well-being, inequality and poverty, and gender differences. Using these themes, it adopts a hands-on data-driven approach to introduce tools and concepts of empirical reasoning. Datasets related to each theme create opportunities for learning by doing.

Quantitative Methods

These courses are required for the Economics track and are optional for the Political Economy track.

ECON BC2411 Statistics for Economics. *4 points*.
BC: Fulfillment of General Education Requirement: Quantitative and Deductive Reasoning (QUA).

Elementary computational methods in statistics. Basic techniques in regression analysis of econometric models. One-hour weekly recitation sessions to complement lectures.

ECON BC3018 Econometrics. *4 points*.
Prerequisites: ECON BC3033 or ECON BC3035, and ECON BC2411 or STAT W1111 or STAT W1211, or permission of the instructor. Specification, estimation and evaluation of economic relationships using economic theory, data, and statistical inference; testable implications of economic theories; econometric analysis of topics such as consumption, investment, wages and unemployment, and financial markets.

Core Theory Courses

The courses listed below, required of both Political Economy and Economics track majors, constitute the core of the Barnard Economics major.

ECON BC3033 Intermediate Macroeconomic Theory. *4 points*.
Prerequisites: An introductory course in economics and a functioning knowledge of high school algebra and analytical geometry or permission of the instructor.
Systematic exposition of current macroeconomic theories of unemployment, inflation, and international financial adjustments.

ECON BC3035 Intermediate Microeconomic Theory. *4 points*.
Prerequisites: An introductory course in microeconomics or a combined macro/micro principles course (ECON BC1003 or ECON W1105, or the equivalent) and one semester of calculus or ECON BC1007, or permission of the instructor.
Preferences and demand; production, cost, and supply; behavior of markets in partial equilibrium; resource allocation in general equilibrium; pricing of goods and services under alternative market structures; implications of individual decision-making for labor supply; income distribution, welfare, and public policy. Emphasis on problem solving.

ECON BC3041 Theoretical Foundations of Political Economy. *3 points*.
BC: Fulfillment of General Education Requirement: Reason and Value (REA)., BC: Fulfillment of General Education Requirement: Ethics and Values.

Prerequisites: An introductory course in economics or permission of the instructor.
Intellectual origins of the main schools of thought in political economy. Study of the founding texts in classical political economy, Marxian economics, neoclassicism, and Keynesianism.

Upper-Level Elective Courses

The following economics elective courses have as a minimum either ECON BC3033, ECON BC3035, or both as prerequisites.

ECON BC3011 Inequality and Poverty. *3 points*.
Prerequisites: ECON BC3035 or ECON BC3033, or permission of the instructor.
Conceptualization and measurement of inequality and poverty, poverty traps and distributional dynamics, economics and politics of public policies, in both poor and rich countries.

ECON BC3012 Economics of Education. *3 points*.
Prerequisites: ECON BC3035 and ECON BC2411 or permission of the instructor.
Analyzes education policies and education markets from an economic perspective. Examines challenges that arise when researchers attempt to identify the causal effects of inputs. Other topics: (1) education as an investment, (2) public school finance, (3) teacher labor markets, (4) testing/accountability programs, (5) school choice programs, and (6) urban public school reforms.

ECON BC3013 Economic History of the United States. *3 points*.
BC: Fulfillment of General Education Requirement: Historical Studies (HIS).

Prerequisites: ECON BC3035 or ECON BC3033, or permission of the instructor.
Economic transformation of the United States from a small, open agrarian society in the late colonial era to the leading industrial economy of the 20th century. Emphasis is given to the quantitative, institutional, and spatial dimensions of economic growth, and the relationship between the changing structures of the economy and state.

ECON BC3019 Labor Economics. *3 points*.
Not offered during 2023-2024 academic year.

Prerequisites: ECON BC3035, or permission of the instructor.
Factors affecting the allocation and remuneration of labor; population structure; unionization and monopsony; education and training, mobility and information; sex and race discrimination; unemployment; and public policy.

ECON BC3022 Economic History of Europe. *3 points*.
BC: Fulfillment of General Education Requirement: Historical Studies (HIS).
Not offered during 2023-2024 academic year.

Prerequisites: Econ BC3035 or Econ BC3033 (or their equivalents), or permission of the instructor.
An introduction to the transformative economic developments that began in Western Europe and spread globally. This course applies economic and empirical reasoning to analyze the industrial revolution, its underlying causes and consequences, from pre-modern times to the 20th-century emergence of a global economy.

ECON UN3025 Financial Economics. *3 points*.
Prerequisites: *ECON W3211, W3213* and *STAT 1201*.
Institutional nature and economic function of financial markets. Emphasis on both domestic and international markets (debt, stock, foreign exchange, eurobond, eurocurrency, futures, options, and others). Principles of security pricing and portfolio management; the Capital Asset Pricing Model and the Efficient Markets Hypothesis.

ECON BC3029 Development Economics. *3 points*.
Not offered during 2023-2024 academic year.

Prerequisites: ECON BC3035 or ECON BC3033, or permission of the instructor.
Critical survey of the main debates within development studies: theory and empirics of growth and structural transformation; dynamics of income distribution and poverty; impact of international economic relations; population, health and nutrition; and the nature and role of government.

ECON BC3038 International Money and Finance. *3 points*.
Prerequisites: ECON BC3033.
Introduction to balance of payments and exchange rate theory; capital mobility and expectations; internal and external adjustment under fixed and flexible exchange rates; international financial markets; capital mobility and expectations; international policy coordination and optimum currency areas; history of the international monetary system.

ECON BC3039 Environmental and Natural Resource Economics. *3 points*.
Prerequisites: ECON BC1003 or ECON W1105. Prerequisite for Economics majors: ECON BC3035.
Link between economic behavior and environmental quality: valuation of non-market benefits of pollution abatement; emissions standards; taxes; and transferable discharge permits. Specific problems of hazardous waste; the distribution of hazardous pollutants across different sub-groups of the U.S. population; the exploitation of commonly owned natural resources; and the links between the environment, income distribution, and economic development.

ECON BC3099 Independent Study. *1-3 points*.
Prerequisites: ECON BC3033 or ECON BC3035 or permission of the instructor.
Topic(s), requirements, workload and point value to be determined in consultation with faculty advisor. Forms available at the Office of the Registrar.

ECON UN3265 The Economics of Money and Banking. *3 points*.
Prerequisites: ECON BC3033 and ECON BC3035 or the equivalent. Introduction to the principles of money and banking. The intermediary institutions of the American economy and their historical developments, current issues in monetary and financial reform.

Senior Requirement

Economics majors must take EITHER Senior Thesis I and Senior Thesis II OR a Senior Seminar plus an additional upper-level economics elective.

ECON BC3061 Senior Thesis I. *4 points*.
Prerequisites: Permission of the instructor and completion of all courses (except for the senior requirement) required for the economics track, political economy track, or economics and mathematics majors. Exceptions to these prerequisites may be granted by the chair of the department only.
Tutorials and conferences on the research for and writing of the senior thesis. This is the 1st semester of a two-semester course sequence.

ECON BC3062 Senior Thesis II. *4 points*.
Prerequisites: Permission of the instructor and completion of all courses (except for the senior requirement) required for the economics track, political economy track, or economics and mathematics majors. Exceptions to these prerequisites may be granted by the chair of the department only.
Tutorials and conferences on the research for and writing of the senior thesis. This is the 2nd semester of a two-semester course sequence.

ECON BC3063 Senior Seminar. *4 points*.
Prerequisites: Permission of the instructor and the completion of all courses (except for the senior requirement) required for the economics track, political economy track, or economics and mathematics majors. Exceptions to these prerequisites may be granted by the chair of the department only. Seminar sections are limited to 15 students.
A topic in economic theory or policy of the instructor's choice. See department for current topics and for senior requirement preference forms.

Cross-Listed Courses
Economics
ECON UN1105 Principles of Economics. *4 points*.
BC: Fulfillment of General Education Requirement: Social Analysis (SOC I)., Recitation Section Required, BC: Fulfillment of General Education Requirement: Social Analysis (SOC II).

Corequisites: *ECON W1155* recitation section with the same instructor. How a market economy determines the relative prices of goods, factors of production, and the allocation of resources and the circumstances under which it does it efficiently. Why such an economy has fluctuations and how they may becontrolled.

ECON UN2029 FED Challenge Workshop. *1 point*.
Prerequisites: *ECON W1105*.
The workshop prepares students to compete in the annual College Fed Challenge sponsored by the Federal Reserve. Topics covered include macroeconomic and financial conditions, monetary policy, financial stability and the Federal Reserve System.

ECON UN2105 The American Economy. *3 points*.
Prerequisites: *ECON W1105*.
The course surveys issues of interest in the American economy, including economic measurement, well-being and income distribution, business cycles and recession, the labor and housing markets, saving and wealth, fiscal policy, banking and finance, and topics in central banking. We study historical issues, institutions, measurement, current performance and recent research.

STEM BC2223 Computer Programming for the Behavioral Sciences. *4 points*.
BC: Fulfillment of General Education Requirement: Quantitative and Deductive Reasoning (QUA).

Students will learn how to write computer programs that can test theories and predictions that arise in the behavioral sciences. For students with little or no programming background.

ECON UN2257 Global Economy. *3 points*.
Prerequisites: *ECON W1105*.
Covers five areas within the general field of international economics: (i) microeconomic issues of why countries trade, how the gains from trade are distributed, and protectionism; (ii) macroeconomic issues such as exchange rates, balance of payments and open economy macroeconomic adjustment, (iii) the role of international institutions (World Bank, IMF, etc); (iv) economic development and (v) economies in transition.

ECON UN3025 Financial Economics. *3 points*.
Prerequisites: *ECON W3211, W3213* and *STAT 1201*.
Institutional nature and economic function of financial markets. Emphasis on both domestic and international markets (debt, stock, foreign exchange, eurobond, eurocurrency, futures, options, and others). Principles of security pricing and portfolio management; the Capital Asset Pricing Model and the Efficient Markets Hypothesis.

ECON UN3211 Intermediate Microeconomics. *3 points*.
Prerequisites: *ECON W1105* or the equivalent; *MATH V1101*, *MATH V1201* (or *MATH V1207*).
The determination of the relative prices of goods and factors of production and the allocation of resources.

ECON UN3213 Intermediate Macroeconomics. *3 points*.
Prerequisites: *ECON W1105* or the equivalent; *MATH V1101* or *MATH V1207*.
Corequisites: *MATH V1201* or *MATH V1207*.
This course covers the determination of output, employment, inflation and interest rates. Topics include economic growth, business cycles, monetary and fiscal policy, consumption and savings and national income accounting.

ECON UN3265 The Economics of Money and Banking. *3 points*.
Prerequisites: ECON BC3033 and ECON BC3035 or the equivalent. Introduction to the principles of money and banking. The intermediary institutions of the American economy and their historical developments, current issues in monetary and financial reform.

ECON UN3412 Introduction To Econometrics. *3 points*.
Prerequisites: *ECON W3211* or *W3213*; *STAT 1201* or *SIEO 3001*; and *MATH V1201* or *V1207.*
Modern econometric methods; the general linear statistical model and its extensions; simultaneous equations and the identification problem; time series problems; forecasting methods; extensive practice with the analysis of different types of data.

ECON GU4020 Economics of Uncertainty and Information. *3 points*.
Prerequisites: *ECON W3211*, *W3213* and *STAT 1201*.
Topics include behavior uncertainty, expected utility hypothesis, insurance, portfolio choice, principle agent problems, screening and signaling, and information theories of financial intermediation.

ECON GU4211 Advanced Microeconomics. *3 points*.
Prerequisites: *ECON W3211*, *W3213*, and *MATH V2010.*
Corequisites: *MATH V2500* or *MATH W4061*.
The course provides a rigorous introduction to microeconomics. Topics will vary with the instructor but will include consumer theory, producer theory, general equilibrium and welfare, social choice theory, game theory and information economics. This course is strongly recommended for students considering graduate work in economics.

ECON GU4213 Advanced Macroeconomics. *3 points*.
Prerequisites: *ECON W3211*, *W3213*, *W3412* and *MATH V2010.*
An introduction to the dynamic models used in the study of modern macroeconomics. Applications of the models will include theoretical issues such as optimal lifetime consumption decisions and policy issues such as inflation targeting. This course is strongly recommended for students considering graduate work in economics.

ECON GU4230 Economics of New York City. *3 points*.
Prerequisites: *ECON W3211*, *W3213* and *STAT 1201*.
This course takes New York as our laboratory. Economics is about individual choice subject to constraints and the ways that choices sum up to something often much more than the parts. The fundamental feature of any city is the combination of those forces that bring people together and those that push them apart. Thus both physical and social space will be central to our discussions. The underlying theoretical and empirical analysis will touch on spatial aspects of urban economics, regional, and even international economics. We will aim to see these features in New York City taken as a whole, as well as in specific neighborhoods of the city. We will match these theoretical and empirical analyses with readings that reflect close observation of specific subjects. The close observation is meant to inspire you to probe deeply into a topic in order that the tools and approaches of economics may illuminate these issues in a fresh way.

ECON GU4251 Industrial Organization. *3 points*.
Prerequisites: *ECON W3211* and *W3213*.
The study of industrial behavior based on game-theoretic oligopoly models. Topics include pricing models, strategic aspects of business practice, vertical integration, and technological innovation.

ECON GU4280 Corporate Finance. *3 points*.
Prerequisites: *ECON W3211*, *ECON W3213* and *STAT 1201*.
An introduction to the economics principles underlying the financial decisions of firms. The topics covered include bond and stock valuations, capital budgeting, dividend policy, market efficiency, risk valuation, and risk management. For information regarding REGISTRATION for this course, go to: http://econ.columbia.edu/registration-information.

ECON GU4321 Economic Development. *3 points*.
Prerequisites: *ECON W3211* and *W3213*.
Historical comparative examination of the economic development problems of the less developed countries; the roles of social institutions and human resource development; the functions of urbanization, rural development, and international trade.

ECON GU4370 Political Economy. *3 points*.
Prerequisites: *ECON W3211*, *W3213*, *STAT 1201* (or *POLS 4710* for those who declared prior to Spring 2014).
The course studies the interaction between government and markets. The first part discusses market failures and the scope and limits of government intervention, including the use of modified market-type tools (for example, cap-and-trade regulations for pollution). The second part discusses collective decision-making, in particular voting and its properties and pathologies. The final part discusses economic inequality and government's role in addressing it.

ECON GU4415 Game Theory. *3 points*.
Prerequisites: *ECON W3211* and *W3213*.
Introduction to the systematic treatment of game theory and its applications in economic analysis.

ECON GU4465 Public Economics. *3 points*.
Prerequisites: *ECON W3211* and *W3213*.
Types of market failures and rationales for government intervention in the economy. Benefit-cost analysis and the theory of public goods. Positive and normative aspects of taxation. The U.S. tax structure.

ECON GU4480 Gender and Applied Economics. *3 points*.
Prerequisites: *ECON W3211*, *W3213*.
This course studies gender gaps, their extent, determinants and consequences. The focus will be on the allocation of rights in different cultures and over time, why women's rights have typically been more limited and why most societies have traditionally favored males in the allocation of resources.

ECON GU4500 International Trade. *3 points*.
Prerequisites: *ECON W3211* and *W3213*.
The theory of international trade, comparative advantage and the factor endowments explanation of trade, analysis of the theory and practice of commercial policy, economic integration. International mobility of capital and labor; the North-South debate.

ECON GU4750 Globalization and Its Risks. *3 points*.
Prerequisites: *ECON W3211* and *W3213*.
The world is being transformed by dramatic increases in flows of people, goods and services across nations. Globalization has the potential for enormous gains but is also associated to serious risks. The gains are related to international commerce where the industrial countries dominate, while the risks involve the global environment, poverty and the satisfaction of basic needs that affect in great measure the developing nations. Both are linked to a historical division of the world into the North and the South-the industrial and the developing nations. Key to future evolution are (1) the creation of new markets that trade privately produced public goods, such as knowledge and greenhouse gas emissions, as in the Kyoto Protocol; (2) the updating of the Breton Woods Institutions, including the creation of a Knowledge Bank and an International Bank for Environmental Settlements.

Industrial Engineering and Operations Research

IEOR E2261 Introduction to Accounting and Finance. *3 points*.
Lect: 3.

Prerequisites: ECON W1105: Principles of Economics.
For undergraduates only. This course is required for all undergraduate students majoring in IE, OR:EMS, OR:FE and OR. This course examines the fundamental concepts of financial accounting and finance, from the perspective of both managers and investors. Topics covered in this course include: principles of accrual accounting; recognizing and recording accounting transactions; preparation and analysis of financial statements, including balance sheets, income statements, cash flow statements, and statements of owners' equity; ratio analysis; pro-forma projections; time value of money (present values, future values and interest/discount rates); inflation; discounted-cash-flow (DCF) project evaluation methods; deterministic and probabilistic measures of risk; capital budgeting. The course is targeted toward students pursuing careers in engineering, economics, finance or business. The class is required for all IEOR undergraduates and for entrepreneurship minors.