

ECONOMICS - MATHEMATICS

Economics Department:

Department Website: <https://econ.columbia.edu>

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The Study of Economics

Economics is the study of the ways in which society allocates its scarce resources among alternative uses and the consequences of these decisions. The areas of inquiry deal with a varied range of topics such as international trade, domestic and international financial systems, labor market analysis, and the study of less developed economies. Broadly speaking, the goal of an economics major is to train students to think analytically about social issues and, as such, provide a solid foundation for not only further study and careers in economics, but also for careers in law, public service, business, and related fields.

The Economics Department offers a general economics major in addition to five interdisciplinary majors structured to suit the interests and professional goals of a heterogeneous student body. All of these programs have different specific requirements but share the common structure of core theoretical courses that provide the foundation for higher-level elective courses culminating in a senior seminar. Students are urged to carefully look through the details of each of these programs and to contact an appropriate departmental advisor to discuss their particular interests.

Student Advising

The Department of Economics offers a variety of advising resources to provide prospective and current undergraduate majors and concentrators with the information and support needed to successfully navigate through the program. These resources are described below.

Consulting Advisors

For answers to the most common questions that students have about the majors, the department has graduate student advisors, who are available by e-mail at econ-advising@columbia.edu, or during weekly office hours to meet with students.

Students should direct all questions and concerns about any economic program to the graduate student advisors either in person or via e-mail. The graduate student advisors can discuss major requirements, scheduling, and major course selection, as well as review student checklists and discuss progress in the major. Occasionally, graduate student advisors may refer a student to someone else in the department (such as the director of undergraduate studies) or in the student's school for additional advising.

Contact information and office hours for the graduate student advisors are posted on the Advisors page [Advisors page](#) of the departmental website in the week prior to the beginning of the semester. Students considering one of the interdepartmental majors should speak to both

a graduate student advisor from the Economics Department and the advisor from the other department early in the sophomore year.

Faculty Advisors

Faculty advisors are available only to declared majors. They are able to discuss students' academic and career goals, both in terms of the undergraduate career and post-graduate degrees and research. Students wishing to discuss these types of substantive topics may request a faculty advisor by completing the google form available on the [Advisors page](#) of the departmental website.

The department does its best to match students with faculty members that share similar academic interests. While faculty advisors do not discuss major requirements—that is the role of the graduate student advisors—they do provide guidance in course selection as it relates to meeting a student's intellectual goals and interests, as well as advise on career and research options. It is recommended that students who plan on attending a Ph.D. program in economics or are interested in pursuing economics research after graduation request a faculty advisor.

Enrolling in Classes

Prerequisites

The Department strictly enforces all course prerequisites. Prerequisite courses cannot be taken concurrently with or after the course—they must be taken before the course. Students who take a course out of sequence (before or concurrently with its prerequisites) will not be allowed to count those credits towards the completion of their major, and consequently will be required to take an additional course to replace those credits. For placement in the calculus sequence, please consult the Math department's section of the Bulletin. The list of Prerequisites for Econ courses can be found on the [Course Prerequisites](#) page of the Dept. website.

Registration for Restricted Classes

Most lecture courses are open to online Registration. However, Seminars, Research Courses, Independent Study and Corporate Finance are restricted. Information regarding Seminar Registration can be found on the [Senior Seminar Registration](#) page. Registration information for Research Course credit, Independent Study and Corporate Finance can be found on the [Registration Information](#) page.

Preparing for Graduate Study

On the [Preparing for Graduate School](#) page on our website, you will find general advice for students thinking about pursuing a PhD in economics. All students who are considering graduate work should review the material posted there. Since graduate work requires more mathematical and statistical training than the economics major, students interested in graduate work should speak with econ-advising about planning their course schedule.

Coursework Taken Outside of Columbia

Advanced Placement

AP tests must be taken in both microeconomics and macroeconomics, with a score of 5 on one test and at least a 4 on the other. Provided that this is achieved, the department grants 4 credits for a score of 4 and 5 on the AP Economics exam along with exemption from [ECON UN1105 PRINCIPLES OF ECONOMICS](#).

IB Credit or GCE A Level Exams

If you took the IB Exam and received either a 6 or a 7 or if you took GCE A Level Exams and received an A or a B, then you will receive credit from the college. Those credits will automatically exempt you from the Principles requirement.

Barnard College Courses

Barnard Economics Core Courses and seminars do NOT count towards the Columbia Economics Major or concentration. Specifically, the following courses will NOT count toward your major program:

[ECON BC1003](#), [ECON BC1007](#), [ECON BC2411](#), [ECON BC3018](#), [ECON BC3033](#), [ECON BC3035](#).

The Barnard courses listed below will count as Electives toward your Economics Major provided you have completed the course prerequisites, have not taken an equivalent course in the Columbia Department, and have fulfilled the minimum requirement of taking 5 lecture courses in the Columbia Department.

Economics (Barnard)

ECON BC2010	The Economics of Gender
ECON BC2012	Economic History of Western Europe
ECON BC2017	INTRODUCTION TO HEALTH ECONOMICS
ECON BC2020	Introduction to Development Economics
ECON BC2075	Logic and Limits of Economic Justice
ECON BC2224	CODING MARKETS
ECON BC3010	American Wellbeing
ECON BC3011	INEQUALITY AND POVERTY
ECON BC3012	THE ECONOMICS OF EDUCATION
ECON BC3013	Economic History of the United States
ECON BC3014	Entrepreneurship
ECON BC3017	Economics of Business Organization
ECON BC3019	LABOR ECONOMICS
ECON BC3027	Economics of Inequality
ECON BC3022	Economic History of Europe
ECON BC3023	Topics in Economic History
ECON BC3024	MIGRATION # ECONOMIC CHANGE
ECON BC3026	Economics of the Public Sector
ECON BC3029	EMPIRICAL APPROACHES DEVLPMNT
ECON BC3031	Economics of Life
ECON BC3038	INTERNATIONAL MONEY # FINANCE
ECON BC3039	Environmental and Natural Resource Economics
ECON BC3041	THEORETICAL FOUNDATIONS-POLIT ECON
ECON BC3045	BUSINESS CYCLES
ECON BC3047	International Trade
ECON BC3049	Economic Evaluation of Social Programs
ECON BC3270	Topics in Money and Finance
ECON UN3025	FINANCIAL ECONOMICS
ECON UN3265	MONEY AND BANKING

NOTES:

- 1) ECON UN2261 Accounting and Finance for Economics does NOT count as an economics elective. Financial Economics majors may take this course to fulfill their accounting requirement.
- 2) The above list is not necessarily complete. Barnard Department on occasion adds new lecture courses. If you have a question about a

Barnard elective course not listed above, then you should contact econ-advising@columbia.edu.

Transfer Courses

Any courses taken outside of the Economics Departments at Columbia or Barnard that you would like to apply towards the completion of your economics degree must be approved by the Department of Economics in addition to approval by your school. All majors and joint majors are required to take a minimum of 5 lecture courses from the Columbia Department of Economics and must take their senior seminar at Columbia.

See the [Transfer Credit Information](#) page for details on which courses may be eligible for transfer credit, as well as information on how to apply for transfer credit. Please read the information carefully before submitting your materials for review.

Study Abroad Courses

All students who plan to study abroad must contact Sunil Gulati during the prior semester to get preliminary approval for any economics courses that they intend to take abroad. Students should also review the information posted on the [Transfer Credit Information](#) page for details regarding which courses may be eligible.

Summer Courses

All students who hope to take classes in the Summer outside of Columbia University must also contact Sunil Gulati in advance to get preliminary approval for any economics courses. Note that students must also have approval from their school to take Summer courses outside of Columbia.

Undergraduate Research and Senior Thesis

Undergraduate Research in Courses

All majors write a research paper in either a senior seminar or in the honors seminar. Each semester the department offers a wide range of senior seminars (see [Senior Seminar Descriptions](#) for the seminars currently on offer). Seminars are small, discussion-based courses focused on a research topic in economics. Students are expected to attend and participate in these courses, as well as to write an original research paper. Registration information for senior seminars is available on the [Senior Seminar Registration](#) page. Some students will write a senior thesis in the Honors Seminar. Details about writing a senior thesis are below.

Senior Thesis Coursework and Requirements

SENIOR HONORS THESIS

Honors Seminar

The honors seminar is a full-year course, and you will not receive a grade until you have completed both semesters. Completing both semesters satisfies your seminar requirement in the economics department. If you do not complete both semesters, however, you must take a senior seminar to graduate as a major. For details see the Senior Honors Thesis info on the [Honors and Prizes](#) page.

Students who successfully complete the Honors Seminar are eligible to graduate with departmental honors in economics.

Undergraduate Research Outside of Courses

During the academic year, students may work as an RA with a faculty member or PhD student and receive 1 – 2 credits of either ECON GU4996 Research Credit or ECON GU4995 Research Credit (GU 4995 is for GS students only). Research positions typically entail an average of 3 hours of work per week per credit. Research credit may not be used as a substitute for elective or seminar requirements in the major and students will receive a letter grade for their work. Students considering graduate work or writing a senior thesis in economics should take one or more RA positions during their time at Columbia. Information on Research Credit (GU4995 and GU4996) is posted on the [Opportunities](#) page. Available RA positions are posted every semester on our WIKI page, [Econ Info For Students](#) (log-in required).

Department Honors and Prizes

Departmental Honors

Economics majors and economics joint majors who wish to be considered for departmental honors in economics must:

1. Have at least a 3.7 GPA in their major courses;
2. Take ECON GU4999 Senior Honors Thesis Workshop (a one-year course);
3. Receive at least a grade of A- in ECON GU4999 Senior Honors Thesis Workshop.

Students must apply for admission to GU4999 and details regarding that application are included in the annual Summer Mailing sent to all students with a declared program in economics. Please note that ECON GU4999 Senior Honors Thesis Workshop may be taken to fulfill the seminar requirement for the economics major and all economics joint majors. Normally no more than 10% of graduating majors receive departmental honors in a given academic year. Please see the [Honors and Prizes](#) page on the department's website for more information.

Undergraduate Prizes

All prize recipients are announced at the end of the spring semester each academic year.

Sanford S. Parker Prize

Established in 1980, this prize is awarded annually to a Columbia College graduating student who majored or concentrated in economics and plans on continuing his or her studies in an economics Ph.D. program within the two years following his or her graduation.

Romine Prize

Established in 1997, this prize is awarded annually to two students (Columbia College or General Studies) majoring in economics: one for the best honors thesis paper, and the other for the best economics seminar paper.

Summer Research Prizes

Parker Summer Research Fellowship

The Parker Summer Fellowship provides financial support for five Columbia College underclassmen who take unpaid summer internships that focus on research. Preference is given to students working with

Columbia researchers but all CC students undertaking a summer research position are eligible to apply.

GS Prize for Summer Research

The GS Summer Fellowship provides financial support for 2 GS underclassmen who take unpaid summer internships that focus on research. Preference is given to students working with Columbia researchers but all GS students undertaking a summer research position are eligible to apply.

Other Important Information

Online Information

Students can access useful information online, including but not limited to: a comprehensive FAQ page; transfer credit information; sample programs and checklists; faculty office hours, contact information and fields of specialization; advisor contact information; teaching and research assistant opportunities; a list of tutors; and current course offerings.

Posted on our [Announcements](#) page are links to the most important memos that we distribute to our majors including pre-registration mailings, the summer mailing and information for new majors. Our [WIKI](#) page has information about opportunities both inside and outside of the department. Login is required to access the WIKI page.

Frequently Asked Questions

As a first step, students are encouraged to visit the Dept.'s [FAQ page](#), which provides comprehensive information and answers to the most frequently-asked questions about the departmental majors and requirements. This page also includes a section that answers specific questions of first-year students, sophomores, and non-majors.

Professors

Douglas Almond (also School of International and Public Affairs)
 Jushan Bai
 Jagdish N. Bhagwati
 Sandra Black (also School of International and Public Affairs)
 Alessandra Casella (also Political Science Department)
 Yeon-Koo Che
 Pierre-André Chiappori
 Graciela Chichilnisky
 Richard Clarida (also School of International and Public Affairs)
 Donald Davis
 Prajit Dutta
 Gautaum Gowrisankaran
 Harrison Hong
 R. Glenn Hubbard (also Business School)
 Navin Kartik
 Wojciech Kopczuk (also School of International and Public Affairs)
 Sokbae (Simon) Lee
 Qingmin Liu
 Suresh Naidu (also School of International and Public Affairs)
 Serena Ng
 Brendan O'Flaherty
 Andrea Prat (also Business School)
 Jeffrey Sachs (also Earth Institute, School of International and Public Affairs, Dept of Health Policy and Management)

Xavier Sala-i-Martin
 Bernard Salanié
 José A. Scheinkman
 Stephanie Schmitt-Grohé
 Joseph Stiglitz (also Business School, School of International and Public Affairs)
 Martín Uribe
 Miguel Urquiola (also School of International and Public Affairs)
 Eric Verhoogen (also School of International and Public Affairs)
 Ebonya Washington (also School of International and Public Affairs)
 David Weinstein
 Michael Woodford (Chair)

Associate Professors

Mark Dean
 Lena Edlund
 Jennifer La'O

Assistant Professors

Hassan Afrouzi
 Michael Best
 Matthieu Gomez
 Emilien Gouin-Bonenfant
 Elliot Lipnowski
 Neomie Pinardon-Touati
 Evan Sadler
 Pietro Tebaldi
 Jack Willis

Lecturers

Irasema Alonso
 Isaac Bjorke
 Tri Vi Dang
 Susan Elmes
 Seyhan Erden
 Tamrat Gashaw
 Sunil Gulati
 Waseem Noor

Adjunct Faculty

Qi Ge
 Claudia Halbac
 Karla Hoff
 Caterina Musatti

On Leave

Prof. Willis (2023-2024)
 Profs. Che, Gouin-Bonenfant, Hong, Lipnowski, Sadler, Washington *Fall 2023*
 Profs. Casella, Schmitt-Grohe (*Spring 2024*)

Guidance for Undergraduate Students in the Department

Program Planning for all Students

There are a number of resources to assist you in planning your program in economics.

- [Checklists](#) for all programs are available on our website.
- [Econ-advising](#) is available to assist all students with academic planning. They can be reached by email or in person during their office hours.
- Tentative annual course offerings are posted on the [website](#) and in departmental newsletters.
- Information for new students is posted on the [Academic Resources Fair](#) page.

Course Numbering Structure

All economics programs begin with an introductory 1000 level course (Principles of Economics) and progress through the required 3000 level required core economics courses (Intermediate Micro, Intermediate Macro and Econometrics). Most elective courses are offered at the 3000 and 4000 level and all require that students have completed at least UN 3211 Int Micro and UN 3213 Int Macro. The department offers a limited number of 2000 level electives and these courses only require that students have completed Principles of Economics.

Guidance for First-Year Students

Our [Academic Resources Fair](#) page has answers to the most common questions of new students at Columbia. On that page you will find information about advising, placement, course planning, opportunities in the department and much more. If you are interested in pursuing economics, then it is strongly recommended that you read through the information posted here.

Guidance for Transfer Students

Our [Academic Resources Fair](#) page has answers to the most common questions of transfer students at Columbia. On that page you will find information about advising, placement, course planning, opportunities in the department and much more. If you are interested in pursuing economics, then it is strongly recommended that you read through the information posted here.

The [Transfer Credit](#) page has all of the information that you will need to apply for transfer credits for economics courses that you have taken elsewhere. Note that the economics department will also review your transfer credits for calculus I, statistics and accounting courses. Details about all of these courses are also posted at Transfer Credit Information.

Undergraduate Programs of Study

Required Coursework for all Programs

Checklists and Requirements

Checklists and Requirement information are available on the [Department website](#).

Economics Core Courses

All of the core courses must be completed **no later than the spring semester** of the student's **junior year** and must be taken at Columbia. *Students who take any core course during the fall semester of their senior year must obtain written permission from the department's director of undergraduate studies.* Unless otherwise specified below, all students must complete the following core courses:

ECON UN1105	PRINCIPLES OF ECONOMICS
ECON UN3211	INTERMEDIATE MICROECONOMICS
ECON UN3213	INTERMEDIATE MACROECONOMICS
ECON UN3412	INTRODUCTION TO ECONOMETRICS

Prerequisites

Course prerequisites are strictly enforced. Prerequisites must be taken before the course, not after or concurrently.

Economics courses taken before the completion of any of its prerequisites, even with instructor approval, are **not** counted toward the major, concentration, or interdepartmental majors. Exemptions from a prerequisite requirement may only be made, in writing, by the department's director of undergraduate studies. Credits from a course taken *prior* to the completion of its prerequisites are **not** counted towards the major requirements. As a consequence, students are required to complete **additional**, specific courses in economics at the direction of the director of undergraduate studies.

The prerequisites for required courses are as follows:

Course	Prerequisites
ECON UN1105 PRINCIPLES OF ECONOMICS	None
MATH UN1101 CALCULUS I	
STAT UN1201 CALC-BASED INTRO TO STATISTICS	MATH UN1101 CALCULUS I
ECON UN3211 INTERMEDIATE MICROECONOMICS	ECON UN1105 PRINCIPLES OF ECONOMICS MATH UN1201 CALCULUS III or UN1205
ECON UN3213 INTERMEDIATE MACROECONOMICS	ECON UN1105 PRINCIPLES OF ECONOMICS MATH UN1101 CALCULUS I Co-requisite: MATH UN1201 CALCULUS III or UN1205
ECON UN3412 INTRODUCTION TO ECONOMETRICS	MATH UN1201 CALCULUS III or UN1205 ECON UN3211 INTERMEDIATE MICROECONOMICS or UN3213 STAT UN1201 CALC-BASED INTRO TO STATISTICS
ECON 2000-level electives	ECON UN1105 PRINCIPLES OF ECONOMICS
ECON GU4211 ADVANCED MICROECONOMICS	ECON UN3211 INTERMEDIATE MICROECONOMICS ECON UN3213 INTERMEDIATE MACROECONOMICS MATH UN2010 LINEAR ALGEBRA Corequisites: MATH UN2500 ANALYSIS AND OPTIMIZATION or GU4061
ECON GU4412 ADVANCED ECONOMETRICS	
ECON GU4213 ADVANCED MACROECONOMICS	
ECON GU4413 Econometrics of Time Series and Forecasting	
ECON UN3025 FINANCIAL ECONOMICS	
ECON GU4020 ECON OF UNCERTAINTY # INFORMTN	
ECON GU4230 ECONOMICS OF NEW YORK CITY	
ECON GU4260 MARKET DESIGN	
ECON GU4280 CORPORATE FINANCE	
ECON GU4370 POLITICAL ECONOMY	
ECON GU4700 FINANCIAL CRISES	
ECON GU4710 FINANCE AND THE REAL ECONOMY	
ECON GU4850 COGNITIVE MECH # ECON BEHAVIOR	
ECON GU4860 BEHAVIORAL FINANCE	
ECON UN3211 INTERMEDIATE MICROECONOMICS	
ECON UN3213 INTERMEDIATE MACROECONOMICS	
ECON UN3412 INTRODUCTION TO ECONOMETRICS	
(Co-requisite)	
ECON UN3211 INTERMEDIATE MICROECONOMICS	
ECON UN3213 INTERMEDIATE MACROECONOMICS	
ECON UN3211 INTERMEDIATE MICROECONOMICS	
ECON UN3213 INTERMEDIATE MACROECONOMICS	
ECON UN3412 INTRODUCTION TO ECONOMETRICS	
All other ECON 3000- and 4000-level electives	
ECON UN3901 ECONOMICS OF EDUCATION	
ECON UN3952 MACROECONOMICS #FORMATION OF EXPECTATIONS	
ECON UN3981 APPLIED ECONOMETRICS	
ECON GU4911 MICROECONOMICS SEMINAR	
ECON GU4913 MACROECONOMICS SEMINAR	
ECON GU4918 SEMINAR IN ECONOMETRICS	
ECPS GU4921 SEMINAR IN POLITICAL ECONOMICS	
ECON UN3211 INTERMEDIATE MICROECONOMICS	
ECON UN3213 INTERMEDIATE MACROECONOMICS	
ECON UN3412 INTRODUCTION TO ECONOMETRICS	
ECON GU4370 POLITICAL ECONOMY	

ECPH GU4950 ECONOMICS #
PHILOSOPHY

ECON UN3211 INTERMEDIATE
MICROECONOMICS
ECON UN3213 INTERMEDIATE
MACROECONOMICS
ECON UN3412 INTRODUCTION TO
ECONOMETRICS

Barnard electives

See Barnard bulletin

It is **strongly recommended** that students take ECON UN3412 INTRODUCTION TO ECONOMETRICS in the semester **immediately** following the completion of the statistics course.

Grading

No course with a grade of D or lower, including calculus and statistics courses, can count toward the major, concentration, or interdepartmental majors. Economics core courses with a grade of D or F must be retaken and completed with a grade of C- or better.

Students who receive a grade of D or F in a core course are permitted to take a higher-level elective course that has that core course as a prerequisite, so long as it is taken concurrently with the retaking of that core course. For example, if a student fails ECON UN3211 INTERMEDIATE MICROECONOMICS, the student must retake it and, in the same semester, may enroll in an elective course for which it is a prerequisite, provided that all other prerequisites for the elective have been completed. The same rule applies to the required math and statistics courses. For example, if a student fails *MATH UN1201 CALCULUS III*, the student may retake calculus III concurrently with *Intermediate Microeconomics*. Students who must retake any core economics or math course may not retake it concurrently with a senior seminar; the economics core courses *ECON UN3211 INTERMEDIATE MICROECONOMICS*, *ECON UN3213 INTERMEDIATE MACROECONOMICS*, and *ECON UN3412 INTRODUCTION TO ECONOMETRICS* must be successfully completed before a student may enroll in a seminar.

A grade of W is not equivalent to a grade of D or F; it does not qualify a student to retake the course concurrently with a higher level course that lists the course as a prerequisite. Students who receive a grade of W in a core course must complete the course with a grade of C- or better before taking a course that lists it as a prerequisite.

Only ECON UN1105 PRINCIPLES OF ECONOMICS may be taken for a grade of Pass/D/Fail, and the student must receive a grade of P for it to count towards the requirements for the major, concentration, or interdepartmental majors.

Economics Electives

Only those courses identified in the Economics Department listings in this Bulletin may be taken for elective credit. All 3000-level or higher electives offered by the Economics Department have ECON UN3211 INTERMEDIATE MICROECONOMICS and ECON UN3213 INTERMEDIATE MACROECONOMICS as prerequisites. However, some electives have additional prerequisites and students should ensure that all prerequisites have been completed (see the table of prerequisites printed above). *Seminars do not count as electives.*

Seminars

Seminars can be taken only after all of the required core courses in economics have been successfully completed. Students may not take or re-take ECON UN3211 INTERMEDIATE MICROECONOMICS, ECON UN3213 INTERMEDIATE MACROECONOMICS, or ECON UN3412

INTRODUCTION TO ECONOMETRICS concurrently with any senior seminar. *Seminars do not count as electives.* Each seminar is limited to sixteen students, with priority given to seniors. For ECPH GU4921 SEMINAR IN POLITICAL ECONOMICS and ECPH GU4950 ECONOMICS # PHILOSOPHY, priority is given to economics-political science and economics-philosophy majors, respectively.

For seminar registration details, read the information posted on the department's *Senior Seminar Registration* page: <http://econ.columbia.edu/senior-seminars-registration>.

Mathematics

Students must consult with the Mathematics Department for the appropriate placement in the calculus sequence. Students must complete one of the following sequences:

Select one of the following sequences:

MATH UN1101 & MATH UN1201	CALCULUS I and CALCULUS III
MATH UN1101 & MATH UN1205	CALCULUS I and ACCELERATED MULTIVARIABLE CALC
MATH UN1207 & MATH UN1208	HONORS MATHEMATICS A and HONORS MATHEMATICS B

In addition:

1. Students who receive a grade of D or F in MATH UN1201 CALCULUS III or MATH UN1205 must retake the course, but may enroll in ECON UN3211 INTERMEDIATE MICROECONOMICS.
2. Students who receive a grade of D or F in MATH UN1207 HONORS MATHEMATICS A may either retake the course, or take MATH UN1201 CALCULUS III or MATH UN1205, and enroll in ECON UN3211 INTERMEDIATE MICROECONOMICS concurrently.

Statistics

Unless otherwise specified below, all students must take STAT UN1201 CALC-BASED INTRO TO STATISTICS, or a higher level course, such as STAT GU4204 STATISTICAL INFERENCE, or STAT GU4001.

Barnard Courses

A limited number of Barnard economics electives may count toward the major, concentration, and interdepartmental majors. Students should pay careful attention to the limit of Barnard electives indicated in their program requirements. Please see the *Transfer Credit* section below for information on the number of Barnard electives that may be taken to fulfill major requirements. In addition, students may receive credit for the major, concentration, and interdepartmental majors only for those Barnard economics courses listed in this Bulletin. However, students may not receive credit for two courses whose content overlaps. Barnard and Columbia economics electives with overlapping content include but are not limited to:

ECON BC3029 & ECON GU4321	EMPIRICAL APPROACHES DEVLPMNT and ECONOMIC DEVELOPMENT
ECON BC3038 & ECON GU4505	INTERNATIONAL MONEY # FINANCE and INTERNATIONAL MACROECONOMICS
ECON BC3019 & ECON GU4400	LABOR ECONOMICS and LABOR ECONOMICS
ECON BC3047 & ECON GU4500	International Trade and INTERNATIONAL TRADE

ECON BC3039 & ECON GU4625	Environmental and Natural Resource Economics and ECONOMICS OF THE ENVIRONMENT
ECON BC3041 & ECON GU4235	THEORETICAL FOUNDATIONS-POLIT ECON and HISTORICAL FOUNDATIONS OF MODERN ECONOMICS: Adam Smith to J M Keynes
ECON GU4400	LABOR ECONOMICS
ECON GU4235	HISTORICAL FOUNDATIONS OF MODERN ECONOMICS: Adam Smith to J M Keynes

Students should always first consult with *econ-advising* to confirm that the Barnard elective they wish to take does not overlap with a Columbia elective that they have already taken or plan to take. Students may *not* take the Barnard core economics, math, statistics, or seminar courses for credit towards the completion of major requirements.

School of Professional Studies Courses

The Department of Economics does not accept *any* of the courses offered through the School of Professional Studies for credit towards the economics major, concentration, or interdepartmental majors with the exception of the courses offered by the Economics Department during the summer session at Columbia.

Other Department and School Courses

Please note that with the exception of the above Barnard courses and the specific courses listed below for the financial economics major, no other courses offered through the different departments and schools at Columbia count toward the economics majors or concentration.

Transfer Credits

Students are required to take a minimum number of courses in the Columbia Economics Department. For all majors and interdepartmental majors, students must complete a minimum of *five* lecture courses in the Columbia department. Students may fulfill their remaining requirements for economics lecture courses through AP (or IB or GCE) credits, Barnard electives, transfer courses, and study abroad courses (the latter two are subject to the approval of the Economics Department). The following table summarizes the new rules:

Program	Number of required economics lecture courses	Minimum number which must be taken in the department	Maximum number of outside allowed
Economics major	9	5	4
Financial economics	8	5	3
Economics-mathematics	7	5	2
Economics-political science	7	5	2
Economics-statistics	7	5	2
Economics-philosophy	7	5	2
Economics concentration	7	4	3

- Lecture courses** do not include seminars, which must be taken in the Columbia Economics Department. The lecture course counts are counts of economics courses only and do **not** include math, statistics, or courses in other departments;
- At least two of the three *3000*-level economics core courses must be taken in the department and no corresponding Barnard courses are accepted. ECON UN3025 FINANCIAL ECONOMICS and ECON UN3265 MONEY AND BANKING are counted as departmental courses regardless of the instructor;
- Outside courses** include AP (or IB or GCE) credits, transfer credits, Barnard *2000*- and *3000*-level elective courses and transfer credits from other universities. In the case where two or more courses taken outside of Columbia are used as the equivalent of ECON UN1105 PRINCIPLES OF ECONOMICS, those courses are counted as one transfer course.
- At least one of the core finance courses, ECON UN3025 FINANCIAL ECONOMICS and ECON GU4280 CORPORATE FINANCE, must be taken at Columbia.

Approval of transfer credits to fulfill economics requirements must be obtained in writing from the Department of Economics (see the [departmental website](#) or speak with your advising dean for information regarding applications for transfer credit). Approval is granted only for courses that are considered to be comparable to those offered at Columbia.

Summer courses taken at other institutions must be approved in writing by the department's transfer credit adviser before the course is taken. The department does not accept transfer credits for any 3000 level core courses taken during a summer session outside of Columbia University. Summer courses taken from the department of economics at Columbia University do not need approval.

Guidelines and instructions on how to request transfer credit approval can be found in the *Transfer Credit Information* page of the [departmental website](#).

Major in Economics

Please read **Required Coursework for all Programs** above. [Checklists](#) for all programs are available on our website.

The economics major requires a minimum of 35 points in economics, 6 points in mathematics, and 3 points in statistics, for a total of at least 44 points as follows:

Economics Core Courses

All economics core courses

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Select at least five electives, of which no more than one may be taken at the 2000-level (including Barnard courses)

Economics Seminar

Select one economics seminar course

Major in Financial Economics

Please read **Required Coursework for all Programs** above.

The Department of Economics offers the major in financial economics, which provides an academic framework to explore the role of financial markets and intermediaries in the allocation (and mis-allocation) of capital. Among the topics studied in financial economics are financial markets, banks and other financial intermediaries, asset valuation, portfolio allocation, regulation and corporate governance.

The financial economics major requires 26 points in economics, 6 points in mathematics, 3 points in statistics, 3 points in business, and 12 points from a list of selected courses for a total minimum of 50 points as follows:

Economics Core Courses

All economics core courses

Finance Core Courses *

ECON UN3025	FINANCIAL ECONOMICS
ECON GU4280	CORPORATE FINANCE
BUSI UN3013	FINANCIAL ACCOUNTING

*NOTE: The department considers BUSI UN3013, IEOR E2261 and ECON UN2261 as overlapping courses. Students who take these three courses shall be credited with one course only. Financial economics majors who are also in the Business Management concentration program (CNBUMG) must take an additional elective from either the financial economics prescribed elective list (below) or from the CNBUMB prescribed list.

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Electives

Select four of the following, of which two must be from the Columbia or Barnard economics departments, or equivalent economics transfer credits:

ECON BC3014	Entrepreneurship
ECON BC3017	Economics of Business Organization
ECON UN3265	MONEY AND BANKING
ECON UN3901	ECONOMICS OF EDUCATION
ECON UN3952	MACROECONOMICS#FORMATION OF EXPECTATIONS
ECON GU4020	ECON OF UNCERTAINTY # INFORMTN
ECON GU4213	ADVANCED MACROECONOMICS
ECON GU4251	INDUSTRIAL ORGANIZATION
ECON GU4260	MARKET DESIGN
ECON GU4412	ADVANCED ECONOMETRICS
ECON GU4415	GAME THEORY
or ECON BC3080	Applied Game Theory
ECON GU4465	PUBLIC ECONOMICS
or ECON BC3026	Economics of the Public Sector
ECON GU4500	INTERNATIONAL TRADE
or ECON BC3047	International Trade
ECON GU4505	INTERNATIONAL MACROECONOMICS
or ECON BC3038	INTERNATIONAL MONEY # FINANCE
ECON G4526	Transition Reforms, Globalization and Financial Crisis
ECON GU4615	LAW AND ECONOMICS
ECON GU4630	Climate Finance
ECON GU4700	FINANCIAL CRISES

ECON GU4710	FINANCE AND THE REAL ECONOMY
ECON GU4840	BEHAVIORAL ECONOMICS
or ECON BC3048	Introduction to Behavioral Economics
ECON GU4850	COGNITIVE MECH # ECON BEHAVIOR
ECON GU4860	BEHAVIORAL FINANCE
BIOT GU4180	ENTREPRENEURSHIP IN BIOTECH
ECON BC3014	Entrepreneurship
ECON BC3017	Economics of Business Organization
ECON BC3043	Monetary Theory # Policy
BUSI UN3021	MARKETING MANAGEMENT
BUSI UN3701	STRATEGY FORMULATION
BUSI UN3702	VENTURING TO CHANGE THE WORLD
BUSI UN3703	LEADERSHIP IN ORGANIZATION
BUSI UN3704	Making History Through Venturing
COMS W1002	COMPUTING IN CONTEXT
HIST W2904	History of Finance
IEOR E4106	STOCHASTIC MODELS
IEOR E4700	INTRO TO FINANCIAL ENGINEERING
MATH UN3050	DISCRETE TIME MODELS IN FINANC
MATH GR5010	INTRO TO THE MATH OF FINANCE
POLS UN3630	POLITCS OF INTL ECON RELATIONS
STAT W3201	Math Finance in Continuous Time
STAT GU4261	STATISTICAL METHODS IN FINANCE
STAT GU4207	ELEMENTARY STOCHASTIC PROCESS
STAT GU4262	Stochastic Processes for Finance

Seminar

The seminar must be chosen from a list of seminars eligible for the financial economics major. The department indicates which seminars are eligible for the major on the Senior Seminars page of the departmental website.

Students must have completed at least one of ECON UN3025 or ECON GU4280 prior to taking their senior seminar.

* 1) Students must complete the finance core no later than fall of their senior year. 2) At least one of the core finance courses, ECON UN3025 and ECON GU4280, must be taken at Columbia.

Major in Economics-Mathematics

Please read **Required Coursework for all Programs** above. [Checklists](#) for all programs are available on our website.

The major in economics and mathematics provides students with a grounding in economic theory comparable to that provided by the general economics major and exposes students to rigorous and extensive training in mathematics. The program is recommended for any student planning to do graduate work in economics.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Mathematics has an assigned adviser with whom students may consult on mathematics requirements. The economics adviser can only advise on economics requirements; the mathematics adviser can only advise on mathematics requirements.

The economics-mathematics major requires a total of 52 or 56 points (depending on mathematics sequence) : 29 points in economics and 23-27 points in mathematics and statistics as follows:

Economics Core Courses

All economics core courses

Economics Electives

Select three electives at the 3000-level or above

Mathematics

Select one of the following sequences:

MATH UN1101 CALCULUS I
& MATH UN1102 and CALCULUS II
& MATH UN1201 and CALCULUS III
& MATH UN2010 and LINEAR ALGEBRA

MATH UN1101 CALCULUS I
& MATH UN1102 and CALCULUS II
& MATH UN1205 and ACCELERATED MULTIVARIABLE
& MATH UN2010 CALC
and LINEAR ALGEBRA

MATH UN1207 HONORS MATHEMATICS A
& MATH UN1208 and HONORS MATHEMATICS B

Note: Students who take MATH UN1205 may not receive credit for both MATH UN1201 and MATH UN1202.

Analysis requirement:

MATH UN2500 ANALYSIS AND OPTIMIZATION

Select three of the following:

MATH UN1202 CALCULUS IV
MATH UN2030 ORDINARY DIFFERENTIAL EQUATIONS

Any mathematics course at the 3000-level or above

Note: Students who take MATH UN1205 will not receive credit for MATH UN1202.

Statistics

Select one of the following sequences:

STAT GU4001 INTRODUCTION TO PROBABILITY AND
STATISTICS

STAT GU4203 PROBABILITY THEORY
& STAT GU4204 and STATISTICAL INFERENCE

Economics Seminar

Select an economics seminar

NOTE:

1. Students who fulfill the statistics requirement with STAT GU4203 and STAT GU4204, may count STAT GU4203 or STAT GU4204 as one of the three required mathematics electives.
2. Students who choose the one year sequence (STAT GU4203/ STAT GU4204), must complete the year long sequence *prior* to taking ECON UN3412. Students receive elective credit for the probability course.

Major in Economics-Philosophy

Please read **Required Coursework for all Programs** above. [Checklists](#) for all programs are available on our website.

Economics-philosophy is an interdisciplinary major that introduces students to basic methodologies of economics and philosophy and stresses areas of particular concern to both, e.g. rationality and decision making, justice and efficiency, freedom and collective choice, logic of empirical theories and testing. Many issues are dealt with historically. Classic texts of Plato, Kant, Mill, Marx, and Smith are reviewed.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Philosophy has an assigned adviser with whom students may consult

on philosophy requirements. The economics adviser can only advise on economics requirements; the philosophy adviser can only advise on philosophy requirements.

The economics-philosophy major requires a total minimum of 54 points: 25 points in economics, 16 points in philosophy, 6 points in mathematics, 3 points in statistics, and 4 points in the interdisciplinary seminar as follows:

Economics Core Courses

ECON UN1105 PRINCIPLES OF ECONOMICS

ECON UN3211 INTERMEDIATE MICROECONOMICS

ECON UN3213 INTERMEDIATE MACROECONOMICS

ECON UN3412 INTRODUCTION TO ECONOMETRICS

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Three Electives are required; two must be selected from the below list, and the remaining elective may be any economics elective at the 3000-level or above.

ECON GU4020 ECON OF UNCERTAINTY # INFORMTN

ECON UN3901 ECONOMICS OF EDUCATION

ECON GU4211 ADVANCED MICROECONOMICS

ECON GU4213 ADVANCED MACROECONOMICS

ECON GU4228 URBAN ECONOMICS

ECON GU4230 ECONOMICS OF NEW YORK CITY

ECON GU4235 HISTORICAL FOUNDATIONS OF
MODERN ECONOMICS: Adam Smith to J
M Keynes

or ECON BC3041 THEORETICAL FOUNDATIONS-POLIT ECON

ECON GU4260 MARKET DESIGN

ECON GU4301 ECONOMIC GROWTH # DEVELOPMENT I

ECON GU4321 ECONOMIC DEVELOPMENT

or ECON BC3029 EMPIRICAL APPROACHES DEVELOPMENT

ECON GU4370 POLITICAL ECONOMY

ECON GU4400 LABOR ECONOMICS

or ECON BC3019 LABOR ECONOMICS

ECON GU4415 GAME THEORY

or ECON BC3080 Applied Game Theory

ECON GU4438 ECONOMICS OF RACE IN THE U.S.

ECON GU4465 PUBLIC ECONOMICS

or ECON BC3026 Economics of the Public Sector

ECON GU4480 GENDER # APPLIED ECONOMICS

ECON GU4500 INTERNATIONAL TRADE

or ECON BC3047 International Trade

ECON GU4615 LAW AND ECONOMICS

ECON GU4625 ECONOMICS OF THE ENVIRONMENT

or ECON BC3039 Environmental and Natural Resource Economics

ECON GU4630 Climate Finance

ECON GU4750 GLOBALIZATION # ITS RISKS

ECON GU4840 BEHAVIORAL ECONOMICS

or ECON BC3048 Introduction to Behavioral Economics

ECON GU4850 COGNITIVE MECH # ECON BEHAVIOR

ECON BC3011 INEQUALITY AND POVERTY

Philosophy Courses

PHIL UN1010 METHODS/PROB OF PHILOSOPHY THOUGHT

PHIL UN3411	SYMBOLIC LOGIC
PHIL UN3701	ETHICS
PHIL UN3551 or PHIL UN3960	PHILOSOPHY OF SCIENCE EPISTEMOLOGY
PHIL GU4561	PROBABILITY # DECISION THEORY
Seminar	
ECPH GU4950	ECONOMICS # PHILOSOPHY

Students who declared before Spring 2014: The requirements for this program were modified in 2014. Students who declared this program before Spring 2014 should contact the director of undergraduate studies for the department in order to confirm their options for major requirements.

Major in Economics–Political Science

Please read **Required Coursework for all Programs** above. [Checklists](#) for all programs are available on our website.

Political economy is an interdisciplinary major that introduces students to the methodologies of economics and political science and stresses areas of particular concern to both. This program is particularly beneficial to students planning to do graduate work in schools of public policy and international affairs.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Political Science has an assigned adviser with whom students may consult on political science requirements. The economics adviser can only advise on economics requirements; the political science adviser can only advise on political science requirements.

The economics–political science major requires a total of 59 points: 22 points in economics, 17 points in political science, 6 points in mathematics, 6 points in statistical methods, 4 points in a political science seminar, and 4 points in the interdisciplinary seminar as follows.

The political science courses are grouped into four areas, i.e. subfields: (1) American Politics, (2) Comparative Politics, (3) International Relations, and (4) Political Theory. For the political science part of the major, students are required to select one area as a major subfield and one as a minor subfield. The corresponding introductory courses in both subfields must be taken, plus two electives in the major subfield, and one in the minor subfield.

Economics Core Courses

ECON UN1105	PRINCIPLES OF ECONOMICS
ECON UN3211	INTERMEDIATE MICROECONOMICS
ECON UN3213	INTERMEDIATE MACROECONOMICS
ECON GU4370	POLITICAL ECONOMY

Mathematics

Select a mathematics sequence

Statistical Methods

STAT UN1201	CALC-BASED INTRO TO STATISTICS
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Select one of the following:

ECON UN3412	INTRODUCTION TO ECONOMETRICS
POLS GU4712	PRINC OF QUANT POL RESEARCH 2

Economics Electives

Select two electives (6 points) at the 3000-level or above

Political Science Courses

Students must choose a Primary Subfield and a Secondary Subfield to study. The subfields are as follows: American Politics (AP), Comparative Politics (CP), International Relations (IR), and Political Theory (PT).

Primary Subfield: Minimum three courses, one of which must be the subfield's introductory course.

Secondary Subfield: Minimum two courses, one of which must be the subfield's introductory course.

Seminars

Students must take the following two seminars:

ECPS GU4921	SEMINAR IN POLITICAL ECONOMICS
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and a Political Science Department seminar, in the student's Primary Subfield. Please select one of the following: *

POLS UN3911	SEMINAR IN POLITICAL THEORY
or POLS UN3912	SEMINAR IN POLITICAL THEORY

POLS UN3921	AMERICAN POLITICS SEMINAR
or POLS UN3922	AMERICAN POLITICS SEMINAR

POLS UN3951	COMPARATIVE POLITICS SEMINAR
or POLS UN3952	Seminar in Comparative Politics

POLS UN3961	INTERNATIONAL POLITICS SEMINAR
or POLS UN3962	INTERNATIONAL POLITICS SEMINAR

- Students who wish to count toward the political science seminar requirement a course that is not in the above list of approved seminars must obtain permission from the political science Director of Undergraduate studies. Barnard colloquia can count for seminar credit only with the written permission of the Director of Undergraduate Studies. Note that admission to Barnard colloquia is by application to the Barnard political science department only.

Major in Economics-Statistics

Please read **Required Coursework for all Programs** above. [Checklists](#) for all programs are available on our website.

The major in economics-statistics provides students with a grounding in economic theory comparable to that provided by the general economics major, but also exposes students to a significantly more rigorous and extensive statistics training than is provided by the general major. This program is recommended for students with strong quantitative skills and for those contemplating graduate studies in economics.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Statistics has an assigned adviser with whom students may consult on statistics requirements. The economics adviser can only advise on economics requirements; the statistics adviser can only advise on statistics requirements.

The economics-statistics major requires a total of 59 points: 29 in economics, 15 points in statistics, 12 points in mathematics, 3 points in computer science as follows:

Economics Core Courses

All economics core courses

Economics Electives

Select three electives at the 3000-level or above

Mathematics

Select one of the following sequences:

MATH UN1101 & MATH UN1102 & MATH UN1201 & MATH UN2010	CALCULUS I and CALCULUS II and CALCULUS III and LINEAR ALGEBRA
MATH UN1101 & MATH UN1102 & MATH UN1205 & MATH UN2010	CALCULUS I and CALCULUS II and ACCELERATED MULTIVARIABLE CALC and LINEAR ALGEBRA
MATH UN1207 & MATH UN1208	HONORS MATHEMATICS A and HONORS MATHEMATICS B
Statistics	
STAT UN1201	CALC-BASED INTRO TO STATISTICS
STAT GU4203	PROBABILITY THEORY
STAT GU4204	STATISTICAL INFERENCE
STAT GU4205	LINEAR REGRESSION MODELS
One elective in statistics from among courses numbered STAT GU 4206 through GU 4266.	
Computer Science	
Select one of the following:	
COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB
COMS W1007	
ENGI E1006	INTRO TO COMP FOR ENG/APP SCI
STAT UN2102	Applied Statistical Computing
Economics Seminar	
ECON GU4918	SEMINAR IN ECONOMETRICS

Students who declared before Spring 2014: The requirements for this program were modified in 2014. Students who declared this program before Spring 2014 should contact the director of undergraduate studies for the department in order to confirm their options for major requirements.

For students who entered Columbia in or before the 2023-24 academic year

Concentration in Economics

Please read **Required Coursework for all Programs** above. [Checklists](#) for all programs are available on our website.

The economics concentration requires a minimum of 25 points in economics, 6 points in mathematics, and 3 points in statistics, for a total of at least 34 points as follows:

Economics Core Courses

All economics core courses

Mathematics

Select a mathematics sequence

Statistics

Select a Statistics course

Economics Electives

Select at least three electives, of which no more than one may be taken at the 2000-level (including Barnard courses)

Economics Core Courses

ECON UN1105 PRINCIPLES OF ECONOMICS. 4.00 points.

Corequisites: ECON UN1155

Corequisites: ECON UN1155 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 be controlled

Fall 2024: ECON UN1105

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 1105	001/10846	M W 8:40am - 9:55am 501 Schermerhorn Hall	Sunil Gulati	4.00	219/220
ECON 1105	002/10847	T Th 2:40pm - 3:55pm 309 Havemeyer Hall	Waseem Noor	4.00	213/210
ECON 1105	003/10848	M W 11:40am - 12:55pm 301 Uris Hall	Isaac Bjorke	4.00	190/200

Spring 2025: ECON UN1105

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 1105	001/13470	M W 8:40am - 9:55am 501 Schermerhorn Hall	Sunil Gulati	4.00	190/220
ECON 1105	002/13480	T Th 2:40pm - 3:55pm 309 Havemeyer Hall	Waseem Noor	4.00	166/210
ECON 1105	003/13536	T Th 1:10pm - 2:25pm 301 Uris Hall	Brendan O'Flaherty	4.00	107/200

ECON UN3211 INTERMEDIATE MICROECONOMICS. 4.00 points.

Prerequisites: ECON UN1105 and MATH UN1101 and (MATH UN1201 or MATH UN1207) *ECON W1105* or the equivalent; *MATH V1101*, *MATH V1201* (or *MATH V1207*).

Prerequisites: ECON UN1105 and MATH UN1101 and (MATH UN1201 or MATH UN1207) The determination of the relative prices of goods and factors of production and the allocation of resources

Fall 2024: ECON UN3211

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3211	001/10851	M W 1:10pm - 2:25pm 614 Schermerhorn Hall	Susan Elmes	4.00	91/110
ECON 3211	002/11065	T Th 1:10pm - 2:25pm 209 Havemeyer Hall	Caterina Musatti	4.00	96/110
ECON 3211	003/10852	T Th 6:10pm - 7:25pm 310 Fayerweather	Qi Ge	4.00	75/96

Spring 2025: ECON UN3211

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3211	001/13542	M W 2:40pm - 3:55pm 310 Fayerweather	Murat Yilmaz	4.00	72/96
ECON 3211	002/13544	M W 11:40am - 12:55pm 310 Fayerweather	Isaac Bjorke	4.00	96/96
ECON 3211	003/13545	M W 1:10pm - 2:25pm 310 Fayerweather	Isaac Bjorke	4.00	94/96
ECON 3211	004/13547	T Th 2:40pm - 3:55pm 329 Pupin Laboratories	Caterina Musatti	4.00	98/96

ECON UN3213 INTERMEDIATE MACROECONOMICS. 4.00 points.

Prerequisites: (MATH UN1101 or MATH UN1207) and ECON UN1105 *ECON W1105* or the equivalent; *MATH V1101* or *MATH V1207*.

Corequisites: MATH UN1201

Prerequisites: (MATH UN1101 or MATH UN1207) and ECON UN1105 or the equivalent. Corequisites: MATH UN1201 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

Fall 2024: ECON UN3213

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3213	001/10853	M W 1:10pm - 2:25pm 402 Chandler	Emilien Gouin- Bonenfant	4.00	105/110
ECON 3213	002/10854	M W 2:40pm - 3:55pm 402 Chandler	Emilien Gouin- Bonenfant	4.00	83/110
ECON 3213	003/11056	T Th 2:40pm - 3:55pm 301 Uris Hall	Irasema Alonso	4.00	151/150

Spring 2025: ECON UN3213

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3213	001/13548	M W 8:40am - 9:55am 517 Hamilton Hall	Martin Uribe	4.00	40/86
ECON 3213	002/13551	M W 10:10am - 11:25am 517 Hamilton Hall	Martin Uribe	4.00	58/86
ECON 3213	003/13552	T Th 4:10pm - 5:25pm 402 Chandler	Irasema Alonso	4.00	147/125

ECON UN3412 INTRODUCTION TO ECONOMETRICS. 4.00 points.

Prerequisites: (ECON UN3211 or ECON UN3213) and (MATH UN1201 or MATH UN1207) and STAT UN1201 *ECON W3211* or *W3213*; *STAT 1201* or *SIEO 3001*; and *MATH V1201* or *V1207*.

Prerequisites: (ECON UN3211 or ECON UN3213) and (MATH UN1201 or MATH UN1207) and STAT UN1201 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

Fall 2024: ECON UN3412

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3412	001/10859	T Th 4:10pm - 5:25pm 203 Mathematics Building	Seyhan Erden	4.00	102/110
ECON 3412	002/10860	M W 2:40pm - 3:55pm 310 Fayerweather	Jushan Bai	4.00	58/96
ECON 3412	003/10861	T Th 1:10pm - 2:25pm 717 Hamilton Hall	Sandra Black	4.00	86/86

Spring 2025: ECON UN3412

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3412	001/13554	T Th 4:10pm - 5:25pm 614 Schermerhorn Hall	Seyhan Erden	4.00	73/120
ECON 3412	002/13555	M W 11:40am - 12:55pm 517 Hamilton Hall	Michael Best	4.00	75/86
ECON 3412	003/13557	M W 2:40pm - 3:55pm 517 Hamilton Hall	Thomas Piskula	4.00	83/86

Economics Electives

ECON UN2105 THE AMERICAN ECONOMY. 3.00 points.

Prerequisites: *ECON W1105*.

Prerequisites: ECON UN1105 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

Fall 2024: ECON UN2105

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 2105	001/10849	T Th 11:40am - 12:55pm 517 Hamilton Hall	Claudia Halbac	3.00	84/86

ECON UN2257 THE GLOBAL ECONOMY. 3.00 points.

Prerequisites: *ECON W1105*.

Prerequisites: ECON UN1105 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

Spring 2025: ECON UN2257

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 2257	001/13538	T Th 11:40am - 12:55pm 301 Pupin Laboratories	Waseem Noor	3.00	80/189

ECON UN3025 FINANCIAL ECONOMICS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 *ECON W3211*, *W3213* and *STAT 1201*.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 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

Fall 2024: ECON UN3025

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3025	001/10850	M W 1:10pm - 2:25pm 501 Schermerhorn Hall	Waldo Ojeda	3.00	131/150
ECON 3025	002/00787	M W 6:10pm - 7:25pm 504 Diana Center	Jose Cao- Alvira	3.00	52/60

Spring 2025: ECON UN3025

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 3025	001/13471	T Th 2:40pm - 3:55pm 301 Uris Hall	Waldo Ojeda	3.00	90/125
ECON 3025	003/00763	T Th 1:10pm - 2:25pm 263 Macy Hall	Elham Saeidinezhad	3.00	72/100
ECON 3025	004/00782	M W 6:10pm - 7:25pm LI002 Milstein Center	Jose Cao- Alvira	3.00	69/100

ECON UN3901 ECONOMICS OF EDUCATION. 3.00 points.

Prerequisites: (econ un3211 and econ un3213 and econ un3412)
 Prerequisites: (econ un3211 and econ un3213 and econ un3412) Course objective: This course has two objectives: (1) To develop students' skills in research and writing. Specifically, participants will work on: formulating a research question, placing it in the context of an existing literature and/or policy area, and using economic and econometric tools to address it in writing. Specifically, in the first part of the class, readings, problem sets, and a midterm exam will build skills in these areas. In the second part, students will come up with a research question, and address it in a research proposal/report. While all the applications will be on the economics of education, these skills will be useful in students' subsequent careers, regardless of the area of economics they focus on. (2) To provide an introduction to key issues in the economics of education. Specifically, education is a significant industry every person entering this course will have already spent years in this industry as a customer, as a worker, as an input, or all of the above. The course will address questions like: What does economics have to say about how this industry is organized and what determines its output? Why do individuals invest in education? What determines the behavior, productivity, and reputation of firms in the industry? What role should government and public policy (if any) play in its operation?

ECON UN3952 MACROECONOMICS#FORMATION OF EXPECTATIONS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
 Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 This course has two main objectives: To introduce students to the process of writing a research paper. This includes identifying and formulating a research question, reviewing the previous literature and positioning the problem in that context, identifying the proper tools and data to answer the question, and finally writing the findings in the format of a research paper. An immediate goal is to prepare the students to undertake a senior thesis project. To provide an introduction to selected topics and survey evidence in macroeconomics, with a focus on the expectation formation process of economic agents. We will start by going through some canonical models that are widely used for economic and policy analysis to understand the role of expectations in the decision making of households and firms. We will then go through a series of survey data and relate the empirical evidence to the theoretical predictions of those canonical models

ECON UN3981 APPLIED ECONOMETRICS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
 The objective of this course is to develop students' research skills and to learn the process of writing an original research paper. The skills and process include the ability to identify a problem and state in a concise manner, literature review, data collection, model formulation and estimation, evaluation of the problem and writing up the findings in a format of a research paper. An immediate and more specific goal is to prepare students to tackle a senior thesis project.

Towards this goal, this course will review or introduce the most widely used econometric techniques for empirical research. These include multiple regressions, probit and logit models, instrumental variables methods, panel data methods, regression discontinuity designs. This course will also introduce some time series methods such as vector autoregressive process, cointegration analysis, financial time series, and modeling of volatilities. Students will need to practice these methods with a computer software package (R or STATA) and with actual economic data sets.

ECON GU4020 ECON OF UNCERTAINTY # INFORMTN. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 *ECON W3211, W3213 and STAT 1201.*

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201
 Topics include behavior uncertainty, expected utility hypothesis, insurance, portfolio choice, principle agent problems, screening and signaling, and information theories of financial intermediation

Spring 2025: ECON GU4020

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4020	001/17549	M W 4:10pm - 5:25pm 516 Hamilton Hall	Ingmar Nyman	3.00	26/50

ECON GU4211 ADVANCED MICROECONOMICS. 4.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and MATH UN2010 *ECON W3211, W3213, and MATH V2010.*

Corequisites: MATH UN2500, MATH GU4061

Prerequisites: ECON UN3211 and ECON UN3213 and MATH UN2010
 Students must register for required discussion section. Corequisites: MATH UN2500 or MATH GU4061 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. Discussion section required

Spring 2025: ECON GU4211

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4211	001/13560	M W 1:10pm - 2:25pm 420 Pupin Laboratories	Susan Elmes	4.00	16/50

ECON GU4213 ADVANCED MACROECONOMICS. 4.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 and MATH UN2010 *ECON W3211, W3213, W3412 and MATH V2010.*

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 and MATH UN2010 Required discussion section ECON GU4214 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

Fall 2024: ECON GU4213

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4213	001/10862	M W 5:40pm - 6:55pm 503 Hamilton Hall	Hassan Afrouzi Khosroshahi	4.00	16/54

ECON GU4228 URBAN ECONOMICS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213.*
 Congestion and other games, and the pricing of transit services. Location theory and land rents. Segregation and discrimination. The fiscal structure of American cities. Zoning and the taking issue. Abandonment and city-owned property. Economic development, abatements, subsidies, and eminent domain. Crime, deadweight losses, and the allocation of police services.

Spring 2025: ECON GU4228

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4228	001/13562	T Th 10:10am - 11:25am 517 Hamilton Hall	Jason Barr	3.00	47/86

ECON GU4230 ECONOMICS OF NEW YORK CITY. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT Un1201 *ECON W3211, W3213 and STAT 1201.*

Prerequisites: ECON UN3211 and ECON UN3213 and STAT Un1201 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. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213.*

Prerequisites: ECON UN3211 and ECON UN3213 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

Fall 2024: ECON GU4251

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4251	001/10863	M W 4:10pm - 5:25pm 517 Hamilton Hall	Gautam Gowrisankaran	3.00	66/86

ECON GU4260 MARKET DESIGN. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 *ECON W3211, ECON W3213 and STAT W1201.*

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 This course uses modern microeconomic tools for understanding markets for indivisible resources and exploring ways to improve their design in terms of stability, efficiency and incentives. Lessons of market design will be applied to developing internet platforms for intermediating exchanges, for auctions to allocate sponsored search advertising, to allocate property rights such as public lands, radio spectrums, fishing rights, for assigning students to public schools, and for developing efficient kidney exchanges for transplantation

Fall 2024: ECON GU4260

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4260	001/10864	M W 2:40pm - 3:55pm 517 Hamilton Hall	Yeon-Koo Che	3.00	43/86

ECON GU4280 CORPORATE FINANCE. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 *ECON W3211, ECON W3213 and STAT 1201.*

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 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>

Fall 2024: ECON GU4280

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4280	001/10867	T Th 11:40am - 12:55pm 390 Geffen Hall	Haran Segram	3.00	80/74
ECON 4280	002/10930	T Th 4:10pm - 5:25pm 310 Fayerweather	Tri Vi Dang	3.00	91/96

Spring 2025: ECON GU4280

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4280	001/13564	M W 11:40am - 12:55pm 390 Geffen Hall	Haran Segram	3.00	78/74
ECON 4280	002/13563	T Th 4:10pm - 5:25pm 207 Mathematics Building	Tri Vi Dang	3.00	59/90

ECON GU4301 ECONOMIC GROWTH # DEVELOPMNT I. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213.*

Prerequisites: ECON UN3211 and ECON UN3213 Empirical findings on economic development, theoretical development models; problems of efficient resource allocation in a growing economy; balanced and unbalanced growth in closed and open economic systems; the role of capital accumulation and innovation in economic growth

Fall 2024: ECON GU4301

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4301	001/15876	M W 11:40am - 12:55pm 517 Hamilton Hall	Nuria Quella	3.00	32/86

ECON GU4321 ECONOMIC DEVELOPMENT. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213.*

Prerequisites: ECON UN3211 and ECON UN3213 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

Fall 2024: ECON GU4321

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4321	001/10931	T Th 1:10pm - 2:25pm 702 Hamilton Hall	Jack Willis	3.00	36/86

ECON GU4325 ECONOMIC DEVELOPMENT OF JAPAN. 3.00 points.

CC/GS/SEAS: Partial Fulfillment of Global Core Requirement

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211* and *W3213*.

Prerequisites: ECON UN3211 and ECON UN3213 The growth and structural changes of the post-World War II economy; its historical roots; interactions with cultural, social, and political institutions; economic relations with the rest of the world

Spring 2025: ECON GU4325

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4325	001/13565	T Th 8:40am - 9:55am 310 Fayerweather	David Weinstein	3.00	80/96

ECON GU4370 POLITICAL ECONOMY. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 or *ECON W3211*, *W3213*, *STAT 1201* (or *POLS 4710* for those who declared prior to Spring 2014).

The objective of this course is to develop understanding of how political institutions and behavior shape economic outcomes, and vice versa. Starting from the micro level study of political behavior, we will build up to analyze the internal workings of institutions and ultimately macro level economic and political outcomes. During the course we will cover the following topics • Limits and potential of markets • Public goods provision • Voting • Redistribution

Fall 2024: ECON GU4370

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4370	001/10932	M W 10:10am - 11:25am 413 Kent Hall	Alessandra Casella	3.00	52/70

ECON GU4400 LABOR ECONOMICS. 3.00 points.Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211* and *W3213*.

The labor force and labor markets, educational and man power training, unions and collective bargaining, mobility and immobility, sex and race discrimination, unemployment.

Spring 2025: ECON GU4400

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4400	001/13566	M W 10:10am - 11:25am 303 Uris Hall	Tatiana Mocanu	3.00	18/54

ECON GU4412 ADVANCED ECONOMETRICS. 4.00 points.Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 and MATH UN2010 *ECON W3211*, *ECON W3213*, *ECON W3412*, *MATH V2010*.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 and MATH UN2010 Students must register for required discussion section. The linear regression model will be presented in matrix form and basic asymptotic theory will be introduced. The course will also introduce students to basic time series methods for forecasting and analyzing economic data. Students will be expected to apply the tools to real data

ECON GU4413 Econometrics of Time Series and Forecasting. 3 points.Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 *W3211*, *W3213*, *W3412*.

Corequisites: MATH UN2010

This course focuses on the application of econometric methods to time series data; such data is common in the testing of macro and financial economics models. It will focus on the application of these methods to data problems in macro and finance.

Spring 2025: ECON GU4413

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4413	001/13568	T Th 11:40am - 12:55pm 417 Mathematics Building	Seyhan Erden	3	16/54

ECON GU4415 GAME THEORY. 3.00 points.Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211* and *W3213*.

Prerequisites: ECON UN3211 and ECON UN3213 Introduction to the systematic treatment of game theory and its applications in economic analysis

Fall 2024: ECON GU4415

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4415	001/11021	T Th 11:40am - 12:55pm 310 Fayerweather	Murat Yilmaz	3.00	68/96

Spring 2025: ECON GU4415

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4415	001/13676	T Th 1:10pm - 2:25pm 142 Uris Hall	Babak Somekh	3.00	81/96

ECON GU4438 ECONOMICS OF RACE IN THE U.S.. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213

Prerequisites: ECON UN3211 and ECON UN3213 ECON GU4400 is strongly recommended. What differences does race make in the U.S. economy? Why does it make these differences? Are these differences things we should be concerned about? If so, what should be done?

The course examines labor markets, housing markets, capital markets, crime, education, and the links among these markets. Both empirical and theoretical contributions are studied

Fall 2024: ECON GU4438

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4438	001/11022	T Th 2:40pm - 3:55pm 517 Hamilton Hall	Brendan O'Flaherty	3.00	76/86

ECON GU4465 PUBLIC ECONOMICS. 3.00 points.Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211* and *W3213*.

Prerequisites: ECON UN3211 and ECON UN3213 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

Fall 2024: ECON GU4465

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4465	001/11023	M W 2:40pm - 3:55pm 141 Uris Hall	Wojciech Kopczuk	3.00	23/60

Spring 2025: ECON GU4465

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4465	001/17551	T Th 10:10am - 11:25am 332 Uris Hall	Jacob Bastian	3.00	48/54

ECON GU4480 GENDER # APPLIED ECONOMICS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211, W3213*.
Prerequisites: ECON UN3211 and ECON UN3213 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

Fall 2024: ECON GU4480

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4480	001/11024	M W 4:10pm - 5:25pm 330 Uris Hall	Lena Edlund	3.00	46/60

ECON GU4500 INTERNATIONAL TRADE. 3.00 points.Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213*.

Prerequisites: ECON UN3211 and ECON UN3213 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

Fall 2024: ECON GU4500

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4500	001/11026	T Th 10:10am - 11:25am 602 Hamilton Hall	Waseem Noor	3.00	59/86

ECON GU4505 INTERNATIONAL MACROECONOMICS. 3.00 points.Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213*.

Prerequisites: ECON UN3211 and ECON UN3213. Econ GU4505 is an elective in the economics major. The course develops models for the analysis of the determinants of international capital flows, trade imbalances, and exchange rates. The models are then used as the basis for the discussion of topics such as Global Imbalances, Uncertainty and the Current Account, The Global Saving Glut, Purchasing Power Parity, Sudden Stops, Real Exchange Rates and Productivity, Covered Interest Rate Parity, Uncovered Interest Rate Parity, Borrowing Externalities and Optimal Capital Controls, Overborrowing, Macroeconomic Adjustment under Flexible and Fixed Exchange Rates, Twin Deficits, and Balance of Payment Crises

ECON GU4615 LAW AND ECONOMICS. 3.00 points.**ECON GU4625 ECONOMICS OF THE ENVIRONMENT. 3.00 points.**

Not offered during 2023-2024 academic year.

Microeconomics is used to study who has an incentive to protect the environment. Government's possible and actual role in protecting the environment is explored. How do technological change, economic development, and free trade affect the environment? Emphasis on hypothesis testing and quantitative analysis of real-world policy issues.

ECON GU4630 Climate Finance. 3.00 points.

In lieu of the failure of legislatures to pass comprehensive carbon taxes, there is growing pressure on the financial system to address the risks of global warming. One set of pressures is to account for the heightened physical risks due to extreme weather events and potential climate tipping points. Another set of pressures are to find approaches to incentivize corporations to meet the goals set out in the Paris Treaty of 2015. These approaches include (1) mandates or restrictions to only hold companies with decarbonization plans, (2) development of negative emissions technologies such as direct-air capture and (3) promotion of natural capital markets that can be used to offset carbon emissions. Moreover, financial markets also provide crucial information on expectations and plans of economic agents regarding climate change. This course will cover both models and empirical methodologies that are necessary to assess the role of the financial system in addressing global warming

Spring 2025: ECON GU4630

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4630	001/13570	M W 1:10pm - 2:25pm 207 Mathematics Building	Jose Scheinkman, Harrison Hong	3.00	84/150

ECON GU4700 FINANCIAL CRISES. 3.00 points.Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 *ECON W3211, W3213 and STAT 1201*.

This course uses economic theory and empirical evidence to study the causes of financial crises and the effectiveness of policy responses to these crises. Particular attention will be given to some of the major economic and financial crises in the past century and to the crisis that began in August 2007.

ECON GU4710 FINANCE AND THE REAL ECONOMY. 3.00 points.

Prerequisites: (Econ UN3211) and (ECON UN3213) and (STAT UN1201)
Prerequisites: (Econ UN3211) and (ECON UN3213) and (STAT UN1201)
This course uses economic theory and empirical evidence to study the links between financial markets and the real economy. We will consider questions such as: What is the welfare role of finance? How do financial markets affect consumers and firms? How do shocks to the financial system transmit to the real economy? How do financial markets impact inequality?

Spring 2025: ECON GU4710

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4710	001/13572	M W 8:40am - 9:55am 602 Hamilton Hall	Matthieu Gomez	3.00	47/86

ECON GU4750 GLOBALIZATION # ITS RISKS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 *ECON W3211 and W3213.*

Prerequisites: ECON UN3211 and ECON UN3213 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

Spring 2025: ECON GU4750

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4750	001/13573	M W 5:40pm - 6:55pm 602 Hamilton Hall	Graciela Chichilnisky	3.00	72/86

ECON GU4840 BEHAVIORAL ECONOMICS. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213

Prerequisites: ECON UN3211 and ECON UN3213 Within economics, the standard model of behavior is that of a perfectly rational, self interested utility maximizer with unlimited cognitive resources. In many cases, this provides a good approximation to the types of behavior that economists are interested in. However, over the past 30 years, experimental and behavioral economists have documented ways in which the standard model is not just wrong, but is wrong in ways that are important for economic outcomes. Understanding these behaviors, and their implications, is one of the most exciting areas of current economic inquiry. The aim of this course is to provide a grounding in the main areas of study within behavioral economics, including temptation and self control, fairness and reciprocity, reference dependence, bounded rationality and choice under risk and uncertainty. For each area we will study three things: 1. The evidence that indicates that the standard economic model is missing some important behavior 2. The models that have been developed to capture these behaviors 3. Applications of these models to (for example) finance, labor and development economics As well as the standard lectures, homework assignments, exams and so on, you will be asked to participate in economic experiments, the data from which will be used to illustrate some of the principals in the course. There will also be a certain small degree of classroom 'flipping', with a portion of many lectures given over to group problem solving. Finally, an integral part of the course will be a research proposal that you must complete by the end of the course, outlining a novel piece of research that you would be interested in doing

Spring 2025: ECON GU4840

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4840	001/13576	M W 11:40am - 12:55pm 142 Uris Hall	Mark Dean	3.00	60/96

ECON GU4850 COGNITIVE MECH # ECON BEHAVIOR. 4.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 *ECON W3211, W3213; STAT 1201.*

Prerequisites: ECON UN3211 and ECON UN3213 and STAT UN1201 Standard economic theory seeks to explain human behavior (especially in economic settings, such as markets) in terms of rational choice, which means that the choices that are made can be predicted on the basis of what would best serve some coherent objective, under an objectively correct understanding of the predictable consequences of alternative actions. Observed behavior often seems difficult to reconcile with a strong form of this theory, even if incentives clearly have some influence on behavior; and the course will discuss empirical evidence (both from laboratory experiments and observations in the field) for some well-established anomalies. But beyond simply cataloguing anomalies for the standard theory, the course will consider the extent to which departures from a strong version of rational choice theory can be understood as reflecting cognitive processes that are also evident in other domains such as sensory perception; examples from visual perception will receive particular attention. And in addition to describing what is known about how the underlying mechanisms work (something that is understood in more detail in sensory contexts than in the case of value-based decision making), the course will consider the extent to which such mechanisms — while suboptimal from a normative standpoint that treats perfect knowledge of one's situation as costless and automatic — might actually represent efficient uses of the limited information and bounded information-processing resources available to actual people (or other organisms). Thus the course will consider both ways in which the realism of economic analysis may be improved by taking into account cognitive processes, and ways in which understanding of cognitive processes might be advanced by considering the economic problem of efficient use of limited (cognitive) resources

ECON GU4860 BEHAVIORAL FINANCE. 3.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
 Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
 Neoclassical finance theory seeks to explain financial market valuations and fluctuations in terms of investors having rational expectations and being able to trade without costs. Under these assumptions, markets are efficient in that stocks and other assets are always priced just right. The efficient markets hypothesis (EMH) has had an enormous influence over the past 50 years on the financial industry, from pricing to financial innovations, and on policy makers, from how markets are regulated to how monetary policy is set. But there was very little in prevailing EMH models to suggest the instabilities associated with the Financial Crisis of 2008 and indeed with earlier crises in financial market history. This course seeks to develop a set of tools to build a more robust model of financial markets that can account for a wider range of outcomes. It is based on an ongoing research agenda loosely dubbed "Behavioral Finance", which seeks to incorporate more realistic assumptions concerning human rationality and market imperfections into finance models. Broadly, we show in this course that limitations of human rationality can lead to bubbles and busts such as the Internet Bubble of the mid-1990s and the Housing Bubble of the mid-2000s; that imperfections of markets – such as the difficulty of short-selling assets – can cause financial markets to undergo sudden and unpredictable crashes; and that agency problems or the problems of institutions can create instabilities in the financial system as recently occurred during the 2008 Financial Crisis. These instabilities in turn can have feedback effects to the performance of the real economy in the form of corporate investments

Spring 2025: ECON GU4860

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4860	001/13578	T Th 1:10pm - 2:25pm 402 Chandler	Harrison Hong	3.00	47/96

Economics Senior Seminars**ECON GU4911 MICROECONOMICS SEMINAR. 4.00 points.**

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
ECON W3211, W3213, W3412. Registration information is posted on the department's Seminar Sign-up webpage.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412

Selected topics in microeconomics

Fall 2024: ECON GU4911

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4911	000/11027		Susan Elmes	4.00	0/800
ECON 4911	001/11028	M 2:10pm - 4:00pm 1027 International Affairs Bldg	Sunil Gulati	4.00	16/16
ECON 4911	002/11029	Th 4:10pm - 6:00pm 1027 International Affairs Bldg	Lena Edlund	4.00	11/16
ECON 4911	003/11030	T 10:10am - 12:00pm Room TBA	Tri Vi Dang	4.00	16/16
ECON 4911	004/11031	W 10:10am - 12:00pm 1027 International Affairs Bldg	Jack Willis	4.00	14/16
ECON 4911	005/11034	Th 2:10pm - 4:00pm 1027 International Affairs Bldg	Waldo Ojeda	4.00	16/16
ECON 4911	006/12118	W 2:10pm - 4:00pm 1027 International Affairs Bldg	Neal Masia	4.00	15/16
ECON 4911	007/18758	T 12:10pm - 2:00pm 1027 International Affairs Bldg	Andrew Abere	4.00	15/16

Spring 2025: ECON GU4911

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4911	000/13579		Susan Elmes	4.00	0/800
ECON 4911	001/13581	T 4:10pm - 6:00pm 1102 International Affairs Bldg	Murat Yilmaz	4.00	15/16
ECON 4911	002/13583	M 2:10pm - 4:00pm 1027 International Affairs Bldg	Sunil Gulati	4.00	16/16
ECON 4911	003/13585	M 10:10am - 12:00pm 1027 International Affairs Bldg	Douglas Almond	4.00	16/16
ECON 4911	004/13587	W 2:10pm - 4:00pm 1027 International Affairs Bldg	Graciela Chichilnisky	4.00	16/16
ECON 4911	005/13590	T 2:10pm - 4:00pm 1027 International Affairs Bldg	Rosanne Altshuler	4.00	11/16
ECON 4911	006/13592	T 10:10am - 12:00pm 1102 International Affairs Bldg	Pedro Tremacoldi Rossi	4.00	15/16
ECON 4911	007/13595	M 12:10pm - 2:00pm 1027 International Affairs Bldg	Benjamin Ho	4.00	16/16
ECON 4911	008/17422	T 12:10pm - 2:00pm 1027 International Affairs Bldg	Andrew Abere	4.00	15/16

ECON GU4913 MACROECONOMICS SEMINAR. 4.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
ECON W3211, W3213, W3412. Registration information is posted on the department's Seminar Sign-up webpage.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
Registration information is posted on the departments Seminar Sign-up webpage. Selected topics in macroeconomics. Selected topics will be posted on the departments webpage

Fall 2024: ECON GU4913

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4913	001/11032	W 4:10pm - 6:00pm 1027 International Affairs Bldg	Noemie Pinardon- Touati	4.00	11/16
ECON 4913	002/11033	Th 8:10am - 10:00am 1027 International Affairs Bldg	Richard Clarida	4.00	13/16

Spring 2025: ECON GU4913

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4913	001/13598	Th 8:10am - 10:00am 1102 International Affairs Bldg	Richard Clarida	4.00	16/16
ECON 4913	002/13604	W 10:10am - 12:00pm 1102 International Affairs Bldg	Joseph Stiglitz, Karla Hoff	4.00	16/16
ECON 4913	003/17426	M 4:10pm - 6:00pm 1102 International Affairs Bldg	Miles Leahey	4.00	15/16

ECON GU4918 SEMINAR IN ECONOMETRICS. 4.00 points.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
ECON 3211, W3213, W3412, and sign-up in the department's office. Registration information is posted on the department's Seminar Sign-up webpage.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412
and sign-up in the departments office. Registration information is posted on the departments Seminar Sign-up webpage. Analyzing data in a more in-depth fashion than in ECON UN3412. Additional estimation techniques include limited dependent variable and simultaneous equation models. Go to the departments undergraduate Seminar Description webpage for a detailed description

Spring 2025: ECON GU4918

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4918	001/13605	W 4:10pm - 6:00pm 1102 International Affairs Bldg	Seyhan Erden	4.00	12/16

ECPS GU4921 SEMINAR IN POLITICAL ECONOMICS. 4.00 points.

Priority is given to economics-political science majors who are in their senior year, but any available space is open to students who have taken the elective course in political economy.

Prerequisites: *ECON W3211, W3213, W3412 (or POLS 4711), W4370*.

Registration information is posted on the department's Seminar Sign-up webpage.

Prerequisites: ECON W3211, W3213, W3412 (or POLS 4711), W4370.

Registration information is posted on the departments Seminar Sign-up webpage. Required for majors in the joint program between political science and economics. Provides a forum in which students can integrate the economics and political science approach to political economy. The theoretical tools learned in political economy are applied: the analysis of a historical episode and the empirical relation between income distribution and politics on one side and growth on the other

Spring 2025: ECPS GU4921

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECPS 4921	001/17541	Th 10:10am - 12:00pm 613 Hamilton Hall	Claudia Halbac	4.00	14/16
ECPS 4921	002/17544	M 10:10am - 12:00pm Room TBA	Carlo Prato	4.00	11/16

ECPH GU4950 ECONOMICS # PHILOSOPHY. 4.00 points.

Open only to economics-philosophy majors who are in their senior year.

Prerequisites: *ECON W3211, ECON W3213, ECON W3412*. Students will be contacted by the Economics department for pre-enrollment.

Prerequisites: ECON W3211, ECON W3213, ECON W3412. Students will be contacted by the Economics department for pre-enrollment. Explores topics in the philosophy of economics such as welfare, social choice, and the history of political economy. Sometimes the emphasis is primarily historical and sometimes on analysis of contemporary economic concepts and theories

Spring 2025: ECPH GU4950

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECPH 4950	002/17528	T 10:10am - 12:00pm 716 Philosophy Hall	Jessica Collins, Brendan O'Flaherty	4.00	4/16

ECON GU4999 SENIOR HONORS THESIS WORKSHOP. 3.00 points.

3 points per semester.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 and *ECON W3211, W3213, W3412*, and the director of the departmental honors program's permission. Students must have a minimum GPA of 3.7 in all required major courses, including calculus and statistics, prior to enrollment.

Prerequisites: ECON UN3211 and ECON UN3213 and ECON UN3412 and the director of the departmental honors programs permission. Students must have a minimum GPA of 3.7 in all required major courses, including calculus and statistics, prior to enrollment. The honors thesis seminar is a year-long course, beginning in the fall semester and ending in the spring semester. Students who have been approved to enter the workshop will be registered for both semesters by the department during the first two weeks of classes; 3 points are earned per semester. This workshop may only be taken by students applying for departmental honors, and it also fulfills the economics seminar requirement for the economics major and all joint majors. Students must see the director during mid-semester registration in the spring to discuss their proposed thesis topic, at which time they will be matched with appropriate faculty who will act as their thesis adviser. Students will meet their adviser over the course of the year at mutually agreed upon times. A rough draft of the thesis will be due during the first week of February in the spring semester, and the final draft will be due three weeks before the last day of classes. Please note that for those joint majors that require two seminars, one in economics and one in the other discipline (i.e. Political Science), the economics senior honors thesis seminar only fulfills the economics seminar requirement

Fall 2024: ECON GU4999

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4999	001/11035	T 4:10pm - 6:00pm 1027 International Affairs Bldg	Lena Edlund	3.00	10/100

Spring 2025: ECON GU4999

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4999	001/13643	T 4:10pm - 6:00pm 1027 International Affairs Bldg	Lena Edlund	3.00	10/100

Other

ECON UN2029 FED CHALLENGE WORKSHOP. 1.00 point.

Prerequisites: (ECON UN1105) *ECON W1105*.

Prerequisites: (ECON UN1105) 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 GU4995 RESEARCH COURSE. 1.00 point.**Fall 2024: ECON GU4995**

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4995	001/15950		Susan Elmes	1.00	11/50

Spring 2025: ECON GU4995

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4995	001/18908		Susan Elmes	1.00	15/800

ECON GU4996 RESEARCH COURSE. 1.00-2.00 points.

Prerequisites: the director of undergraduate studies permission. Provides students with the experience of participating in the research process by matching them to a faculty mentor who will put them to work on one of his or her current research projects. A list of available research positions is distributed each semester on the major listserv

Fall 2024: ECON GU4996

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4996	001/15951		Susan Elmes	1.00-2.00	79/50

Spring 2025: ECON GU4996

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4996	001/18909		Susan Elmes	1.00-2.00	68/800

ECON GU4998 SUPERVISED INDEPENDENT STUDY. 1.00-4.00 points.

Prerequisites: the director of undergraduate studies permission

Fall 2024: ECON GU4998

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ECON 4998	001/21224		Susan Elmes	1.00-4.00	6/50

Of Related Interest

Note: Barnard economic *core* courses

(ECON BC1003, ECON BC1007, ECON BC2411, ECON BC3018, ECON BC3033, ECON BC3039, and *seminars* do not count towards the Columbia economics major and concentration.

Economics (Barnard)

ECON BC2010	The Economics of Gender
ECON BC2012	Economic History of Western Europe
ECON BC2017	INTRODUCTION TO HEALTH ECONOMICS
ECON BC2020	Introduction to Development Economics
ECON BC2224	CODING MARKETS
ECON BC2075	Logic and Limits of Economic Justice
ECON BC3027	Economics of Inequality
ECON BC3010	American Wellbeing
ECON BC3011	INEQUALITY AND POVERTY
ECON BC3012	THE ECONOMICS OF EDUCATION
ECON BC3013	Economic History of the United States
ECON BC3014	Entrepreneurship
ECON BC3017	Economics of Business Organization
ECON BC3019	LABOR ECONOMICS
ECON BC3022	Economic History of Europe
ECON BC3023	Topics in Economic History
ECON BC3024	MIGRATION # ECONOMIC CHANGE
ECON UN3025	FINANCIAL ECONOMICS
ECON BC3026	Economics of the Public Sector
ECON BC3029	EMPIRICAL APPROACHES DEVLPMNT
ECON BC3031	Economics of Life
ECON BC3038	INTERNATIONAL MONEY # FINANCE
ECON BC3039	Environmental and Natural Resource Economics
ECON BC3041	THEORETICAL FOUNDATIONS-POLIT ECON
ECON BC3045	BUSINESS CYCLES
ECON BC3047	International Trade
ECON BC3049	Economic Evaluation of Social Programs
ECON UN3265	MONEY AND BANKING
ECON BC3270	Topics in Money and Finance