Economics

Department Website: http://economics.uchicago.edu

Program of Study

At the Kenneth C. Griffin Department of Economics, our objective is to convey the ideas and methods of academic economics. Broadly, economics studies how society allocates scarce resources. Our program, which spans principles to advanced topics classes, from preparatory courses in mathematics and statistics to research opportunities, trains students to reason like economists, construct and analyze models, and compare model predictions to real-world observations.

Upon completing the major, we expect students to achieve the following learning outcomes:

(1) **Analytical Reasoning:** Students will develop strong analytical reasoning abilities. They will be able to solve economic models that embody optimizing behaviors and equilibrium forces and use these models to analyze real-world issues.

(2) **Numeracy and Computational Skills:** Students will gain proficiency in numeracy and computational skills. This includes obtaining data and using computers and programming languages to manipulate data both numerically and visually.

(3) **Empirical Methods:** Students will become well-versed in empirical methods. They will be able to design and implement empirical exercises that validate economic theories. These exercises include statistical inferences, randomized experiments, and calibrations/simulations.

(4) **Argumentation and Evidence Evaluation:** Using these analytical and empirical skills, students will be able to evaluate existing arguments, produce supportive or refutatory evidence, and construct arguments that are grounded in the economic approach.

Our economics program offers four distinct degree options: the standard track, the business economics specialization, the data science specialization, and the politics and policy specialization. The standard track emphasizes general economic principles and the use of mathematical methods to establish core results. Within this track, students can pursue more advanced, honors-level coursework in intermediate microeconomics, intermediate macroeconomics, and econometrics. The business economics specialization focuses on applying these principles, particularly in business contexts. The data science specialization provides advanced training in computational and data analysis methods and their applications to economic problems. Finally, the politics and policy specialization sits at the intersection of economics and public policy, combining the analytical rigor of economic theory with a clear understanding of political institutions, power, and governance. The curriculum is designed to allow students to explore all options before selecting the one that best aligns with their interests and career goals.

BA in Economics: Standard Track

The program in economics can be divided into five component parts:

1. **Fundamentals**: provides students with the basic skills required to be successful in the major.
2. **Core Curriculum**: consists of three courses designed to introduce students to the "economic approach."
3. **Empirical Methods sequence**: provides students with the fundamental techniques of data analysis.
4. **Economic Policy course**: applies the tools developed in the core curriculum to issues of fiscal policy, monetary policy, and other policy discussions relevant to the current state of the economy.
5. **Electives**: allows students to tailor the economics major to their interests.

Program Requirements, Standard Track

Fundamentals

Students must begin the economics major by demonstrating competence in basic calculus and principles of economics. The fundamentals sequence consists of the following courses. The first two are required; the second two are strongly recommended:

MATH 13300	Elementary Functions and Calculus III	100
or MATH 15300	Calculus III	
or MATH 16300	Honors Calculus III	
or MATH 16310	Honors Calculus III (IBL)	
or MATH 18300	Mathematical Methods in the Physical Sciences I	
MATH 15250	Mathematical Methods for Economic Analysis	100
or MATH 18400	Mathematical Methods in the Physical Sciences II	
or MATH 20400	Analysis in Rn II	
or MATH 20410	Analysis in Rn II (accelerated)	

or MATH 20420	Analysis in Rn II (IBL)	
or MATH 20800	Honors Analysis in Rn II	
ECON 10000	Principles of Microeconomics	100
ECON 10200	Principles of Macroeconomics	100

Students who wish to complete the major with more rigorous mathematics may substitute MATH 20400 Analysis in Rn II for MATH 15250 Mathematical Methods for Economic Analysis.

Calculus

Students who have an interest in the major should take calculus at the highest level for which they qualify.

1. **MATH 13000s**: Students must complete MATH 13300 Elementary Functions and Calculus III prior to enrolling in ECON 20000 The Elements of Economic Analysis I. Students who have completed MATH 13300 Elementary Functions and Calculus III may enroll in MATH 15250 Mathematical Methods for Economic Analysis concurrently with ECON 20000 The Elements of Economic Analysis I. Students may find it useful to complete MATH 15250 Mathematical Methods for Economic Analysis prior to enrolling in the Elements of Economic Analysis sequence altogether.

2. **MATH 15000s**: Students enrolling in the MATH 15000s sequence must complete MATH 15250 Mathematical Methods for Economic Analysis prior to enrolling in ECON 20000 The Elements of Economic Analysis I. Students must complete MATH 15300 Calculus III prior to enrollment in ECON 20200 The Elements of Economic Analysis III.

3. **MATH 16000s and 16010s**: Students enrolling in the MATH 16000s sequences must complete MATH 16200 Honors Calculus II or MATH 16210 Honors Calculus II (IBL) before enrolling in ECON 20000 The Elements of Economic Analysis I. Enrollment in ECON 20000 The Elements of Economic Analysis I requires completion or concurrent enrollment in MATH 16300 Honors Calculus III/MATH 16310 Honors Calculus III (IBL) and demonstrated competency in Microeconomics (see Core Curriculum for details).

4. **MATH 18000s:** Students who are interested in double majoring with a physical sciences major (chemistry, biochemistry, physics, astrophysics, molecular engineering, and/or statistics) may use the Math 18000s to satisfy the calculus and linear algebra requirements of the economics major. They should take MATH 18300-18400-18500 Mathematical Methods in the Physical Sciences I-II-III. Students double majoring with a physical sciences major should not take MATH 15250 Mathematical Methods for Economic Analysis or MATH 15300 Calculus III. Students who do not complete the full sequence of MATH 18300-18400-18500 Mathematical Methods in the Physical Sciences I-II-III will need to complete MATH 13300 Elementary Functions and Calculus III/MATH 15300 Calculus III/MATH 16300 Honors Calculus III, MATH 15250 Mathematical Methods for Economic Analysis, and MATH 19620 Linear Algebra/STAT 24300 Numerical Linear Algebra for the economics major requirements. For further questions regarding course substitutions in the MATH 18000s sequence, please consult the Department of Mathematics.

Students may satisfy the MATH 15300 Calculus III requirement by placement (based on the Higher-Level Math Test administered by the College prior to Orientation) and completion of a higher-level proof-based mathematics course (MATH 15910 Introduction to Proofs in Analysis or MATH 20250 Abstract Linear Algebra or higher). In this case, students should continue their mathematics training with the highest mathematics level for which they qualify.

Principles of Economics

Students are expected to begin their study of economics with ECON 10000 Principles of Microeconomics and ECON 10200 Principles of Macroeconomics. These two introductory courses are designed for students with limited or no prior course work in economics. Students are strongly encouraged to complete ECON 10000 Principles of Microeconomics prior to ECON 20000 The Elements of Economic Analysis I (or ECON 20010 The Elements of Economic Analysis I Honors) and ECON 10200 Principles of Macroeconomics prior to ECON 20200 The Elements of Economic Analysis III (or ECON 20210 The Elements of Economic Analysis III Honors). While these two courses provide basic economics knowledge, they are not required in the standard track of the major. Students who matriculated at the University of Chicago in 2016–17 or later may use ECON 10200 Principles of Macroeconomics to fulfill one of the standard track economics elective requirements.

Core Curriculum

The core curriculum consists of three courses. Students may use the standard or honors sequence to satisfy this requirement. The honors sequence is designed for students interested in economics research and/or use of more sophisticated mathematical models.

Standard Core Sequence		300
ECON 20000	The Elements of Economic Analysis I	
ECON 20100	The Elements of Economic Analysis II	
ECON 20200	The Elements of Economic Analysis III	

or Honors Core Sequence		300
ECON 20010	The Elements of Economic Analysis I Honors	
ECON 20110	The Elements of Economic Analysis II Honors	
ECON 20210	The Elements of Economic Analysis III Honors	

Empirical Methods

In the modern economy, quantitative methods are highly valued skills. In order to satisfy the empirical methods component of the standard economics major, students must complete the following sequence of courses in consecutive quarters, beginning with Linear Algebra and concluding with Econometrics:

One of the following:		100
MATH 19620	Linear Algebra	
or STAT 24300	Numerical Linear Algebra	
or MATH 18500	Mathematical Methods in the Physical Sciences III	
or MATH 20250	Abstract Linear Algebra	
or MATH 20700	Honors Analysis in Rn I	
One of the following:		100
STAT 23400	Statistical Models and Methods	
or STAT 24400	Statistical Theory and Methods I	
or STAT 24410	Statistical Theory and Methods Ia	
One of the following:		100
ECON 21020	Econometrics	
or ECON 21030	Econometrics - Honors	
Total Units		300

Students may not use AP Statistics credit to satisfy the statistics requirement. Students with AP credit will need to expand on their training with STAT 23400 Statistical Models and Methods, STAT 24400 Statistical Theory and Methods I, or STAT 24410 Statistical Theory and Methods Ia. Students may not earn credit for both STAT 22000 Statistical Methods and Applications (via course enrollment or AP exam) and STAT 23400 Statistical Models and Methods.

Students who wish to pursue more advanced training in empirical methods may complete STAT 24300 Numerical Linear Algebra or MATH 20250 Abstract Linear Algebra or MATH 20700 Honors Analysis in Rn I; either STAT 24400 Statistical Theory and Methods I or STAT 24410 Statistical Theory and Methods Ia; and ECON 21030 Econometrics - Honors.

Economic Policy

The economic policy requirement provides students the opportunity to apply methods and tools taught in the economics core sequence to analyze current issues centered around monetary and fiscal policy. Most students will complete the economic policy requirement with ECON 23950 Economic Policy Analysis, but students interested in learning more formal approaches may use one of the other macroeconomics courses listed below to satisfy the requirement.

ECON 23950	Economic Policy Analysis	100
or ECON 23200	Topics in Macroeconomics	
or ECMA 33220	Introduction to Advanced Macroeconomic Analysis	
or ECMA 33330	Introduction to Dynamic Economic Modeling	

Students who complete more than one of the above courses may apply the additional courses to satisfy the economics elective requirements. ECON 23950 Economic Policy Analysis may not count as an economics elective.

Electives

All students in the economics major must complete a minimum of four additional economics courses to broaden their exposure to areas of applied economics or economic theory. These courses must have a higher course number than ECON 20210 The Elements of Economic Analysis III Honors, with the following exceptions: ECON 21020 Econometrics, ECON 21030 Econometrics - Honors, and ECON 23950 Economic Policy Analysis may not be used to satisfy the economics elective requirements; students who matriculated in 2016–17 or later may use ECON 10200 Principles of Macroeconomics to satisfy one of the economics elective requirements.

Advanced undergraduate students may use economics master's-level (ECMA) courses to satisfy the major elective requirements.

Students may use one course (from the pre-approved outside electives list or approved by petition) outside of the University of Chicago Department of Economics to satisfy their elective requirements. Students may apply only one of the following two exceptions to this rule:

Exception (A): Students may count an additional outside course to satisfy elective requirements of the major as long as it is drawn from the pre-approved outside electives listed below.

Exception (B): Students who participate in a Study Abroad program may petition to count an additional outside course completed at the host institution to satisfy elective requirements of the major. Students pursuing the standard economics track and data science specialization may petition to count up to two courses outside of the University of Chicago Department of Economics (whether through a different UChicago department or through a Study Abroad program) toward the economics electives requirement. Business courses will not be approved to satisfy the ECON elective requirement. The remaining electives must be completed with the University of Chicago Department of Economics. Petitions must be submitted prior to course enrollment to be considered.

These rules imply that at most two courses completed outside the University of Chicago Department of Economics may be used to satisfy the elective requirements of the major. For example, if a student completes two courses as part of a Study Abroad program, then the student has met the cap of the two outside electives and must complete the remaining elective requirements in the University of Chicago Department of Economics.

The following are pre-approved outside electives for the standard economics track:

CMSC 14100	Introduction to Computer Science I
or BUSN 20550	Application Development
Statistics	
STAT 24500	Statistical Theory and Methods II
or STAT 24510	Statistical Theory and Methods IIa
STAT 25100	Introduction to Mathematical Probability
or STAT 25150	Introduction to Mathematical Probability-A
STAT 25300	Introduction to Probability Models
STAT 26100	Time Dependent Data
Mathematics	
MATH 20500	Analysis in Rn III
or MATH 20510	Analysis in Rn III (accelerated)
or MATH 20520	Analysis in Rn III (IBL)
or MATH 20900	Honors Analysis in Rn III
MATH 27300	Basic Theory of Ordinary Differential Equations
University of Chicago Booth School of Business *	
BUSN 20410	Corporation Finance (or BUSN 35200)
BUSN 20620	Data Driven Marketing (or BUSN 37105)
BUSN 20710	Behavioral Economics (or BUSN 38120)
BUSN 20800	Big Data (or BUSN 41201)
BUSN 20820	Financial Econometrics (or BUSN 41203)
BUSN 20810	Machine Learning (or BUSN 41204)
BUSN 20900	Competitive Strategy (or BUSN 42001)

* BUSN 2XXXX-level (undergraduate-only) versions of these courses will follow some College policies regarding registration, scheduling, grading, etc. The BUSN 3XXXX-level (and higher) courses will be subject to Chicago Booth's academic and administrative policies. Consult the Chicago Booth website (https://www.chicagobooth.edu/programs/taking-courses-at-booth/) for details.

Courses in other degree programs may be considered for elective credit through petition. To be considered, these courses must require the equivalent prerequisite course work of ECON 20100 The Elements of Economic Analysis II. Petitions must be submitted prior to course enrollment to be considered. Graduate level economics courses will be counted for elective credit, but consultation with the Undergraduate Office in advance of course registration is required. Note: Provisional and early final grades are not given for economics graduate courses or BUSN 3XXXX-level (and higher) courses. Economics graduate courses and BUSN 3XXXX-level (and higher) courses should not be taken in the student's graduating quarter unless the student will have completed all forty-two credits required for graduation, not counting the graduate course, and all requirements for all majors.

Summary of Requirements

For a summary of requirements for the BA in economics, see below.

Sample Programs for the Standard Track

The following is a recommended sample plan of study (excluding four elective courses) for those students entering with the MATH 13000s sequence:

First Year		
Autumn Quarter	**Winter Quarter**	**Spring Quarter**
MATH 13100	MATH 13200	MATH 13300
ECON 10000		
Second Year		
Autumn Quarter	**Winter Quarter**	**Spring Quarter**
ECON 20000	ECON 20100	ECON 20200
MATH 15250	ECON 10200	
Third Year		
Autumn Quarter	**Winter Quarter**	**Spring Quarter**
ECON 23950	STAT 23400	ECON 21020
MATH 19620		

The following is a recommended plan of study (excluding four economics elective courses) for those students entering with the MATH 15000s or MATH 16000s sequence:

First Year		
Autumn Quarter	**Winter Quarter**	**Spring Quarter**
MATH 15100	MATH 15200	MATH 15250
ECON 10000		
Second Year		
Autumn Quarter	**Winter Quarter**	**Spring Quarter**
ECON 20000	ECON 20100	ECON 20200
MATH 15300	MATH 19620	STAT 23400
	ECON 10200	
Third Year		
Autumn Quarter		
ECON 23950		
ECON 21020		

Students wanting to appropriately plan their economics major with the courses MATH 20400 Analysis in Rn II, STAT 24400 Statistical Theory and Methods I, or STAT 24410 Statistical Theory and Methods Ia should consult with the Undergraduate Program Office in the Department of Economics.

BA in Economics with Specialization in Business Economics

The specialization in business economics is organized around the fundamental economic theory and empirical methods that students interested in pursuing careers in the private sector, the non-profit sector, and the public sector (among others) will find useful. Students who begin by following the standard economics major path have several decision points at which they can choose to specialize in business economics. Students should consult early in the first year with the Department of Economics Undergraduate Program to design a curriculum that satisfies their professional goals.

While completion of the full calculus sequence is not required for the specialization in business economics, students are strongly encouraged to continue their mathematical training at the highest level for which they qualify. This approach builds a stronger quantitative skill set, enables enrollment in the 200-level core economics courses in economic theory and econometrics, and expands future career and academic opportunities.

Note that BUSN 2XXXX-level (undergraduate-only) versions of courses offered by the University of Chicago Booth School of Business (Chicago Booth) will follow some College policies regarding registration, scheduling, grading, etc. The BUSN 3XXXX-level (and higher) courses will be subject to Chicago Booth's academic and administrative policies. Consult the Chicago Booth website (https://www.chicagobooth.edu/programs/taking-courses-at-booth/faq/#beecf17b3e304bae93c50f4f595c27d6) for details.

Early final grades will be given for graduating students in BUSN 2XXXX-level courses. The Booth Registrar's Office will coordinate with instructors to issue early final grades for graduating students in College-level Booth courses.

Note: Early final grades are not given for BUSN 3XXXX-level (and higher) courses. These courses should not be taken in the student's graduating quarter unless the student will have completed all graduation requirements, irrespective of the BUSN 3XXXX-level course.

As with the standard economics program, this specialization is divided into five component parts:

1. Core**:** The core component is designed to introduce students to the tools of basic economic analysis. These courses include fundamental course work in microeconomics, macroeconomics, and business education.

2. Methods**:** The methods component is designed to introduce students to the different toolkits on which economists rely to analyze problems in both microeconomics and macroeconomics.
3. Empirical Analysis**:** The empirical analysis component provides students with the fundamental techniques of data analysis. These courses emphasize the application of empirical methods to relevant examples and develop the essential computer skills students need to lead successful careers.
4. Perspectives**:** The perspectives requirement recognizes that successful careers require broad-based understanding of the markets and industries in which our potential majors are likely to participate. This requirement is intended to facilitate both the acquisition of sector-specific knowledge and/or job-specific skills that are likely to provide context for the student's economics and business training.
5. Electives**:** Electives from the University of Chicago Booth School of Business allow students to tailor the program to their interests.

Core

The core component is designed to introduce students to the tools of basic economic analysis. These courses include fundamental course work in microeconomics and macroeconomics. These courses introduce theory but emphasize the application of these tools to standard problems that students are likely to encounter as they carry out their professional activities. The core component consists of three courses:

ECON 10000	Principles of Microeconomics	100
or ECON 20000	The Elements of Economic Analysis I	
or ECON 20010	The Elements of Economic Analysis I Honors	
ECON 10200	Principles of Macroeconomics	100
or ECON 20200	The Elements of Economic Analysis III	
or ECON 20210	The Elements of Economic Analysis III Honors	
One Foundations of Business Education course, chosen from: [+]		100
BUSN 20100	Financial Accounting (or BUSN 30000)	
BUSN 20330	Building the New Venture (or BUSN 34103)	
BUSN 20400	Investments (or BUSN 35000)	
BUSN 20410	Corporation Finance (or BUSN 35200)	
BUSN 20702	Managerial Decision Making (or BUSN 38002)	
BUSN 20600	Marketing Management (or BUSN 37000)	
BUSN 20500	Operations Management (or BUSN 40000)	
BUSN 20800	Big Data (or BUSN 41201)	
BUSN 20900	Competitive Strategy (or BUSN 42001)	
Total Units		300

[+] BUSN 2XXXX-level (undergraduate-level) versions of these courses will follow some College policies regarding registration, scheduling, grading, etc. The BUSN 3XXXX-level (and higher) versions will be subject to Chicago Booth's academic and administrative policies. Consult the Chicago Booth website for details. Students who have taken a BUSN 2XXXX-level course cannot enroll in the 3XXXX-level (or higher) equivalent course and vice-versa.

Methods

The methods component of the major is designed to expose students to the different toolkits on which economists rely to analyze problems. These methods courses include offerings in basic price theory, game theory, and experimental methods. This component also includes course work that will be useful in macroeconomic and financial analysis. Students must complete two microeconomics methods course and two macroeconomics methods course from the lists below. Students must complete either ECON 19000 Economics for Everyone: Micro or ECON 19100 Economics for Everyone: Macro as one of the four required methods courses. Students may not enroll in both ECON 19000 Economics for Everyone: Micro and ECON 19100 Economics for Everyone: Macro. Note that not all ECON xxxxx courses are offered by the Griffin Department of Economics as they may be cross-listed with other courses, offered by other departments or schools. Method courses must be offered by the Griffin Department and have to be drawn from the following list:

Two Microeconomics Methods courses chosen from:		200
ECON 19000	Economics for Everyone: Micro [+]	
ECON 10700	Introductory Game Theory [#]	
or ECON 20700	Game Theory and Economic Applications	
ECON 11600	Experimental Design	
ECON 11700	Introduction to Behavioral and Experimental Economics [^]	
or ECON 21800	Experimental Economics	

ECON 11850	Behavioral Economics and Welfare Analysis	
ECON 14000	Introduction to Labor Economics [++]	
or ECON 24000	Labor Economics	
ECON 14050	Introduction to Labor Economics and the Firms	
ECON 16040	Introduction to Human Capital	
ECON 16550	The Climate and Growth Challenge	
ECON 16560	Consumers, Firms, and the Environment	
ECON 16700	Introduction to Economics of Education	
ECON 17700	Introduction to Health Economics	
ECON 18010	Introduction to Managerial Microeconomics	
ECON 18650	Law and Economics of Business Law	
ECON 19200	Introduction to Issues and Methods in Microeconomics	
ECON 20100	The Elements of Economic Analysis II	
or ECON 20110	The Elements of Economic Analysis II Honors	
ECON 20520	Formal Models of Political Economics	
ECON 24050	Labor Economics and Public Policy	
ECON 26040	Human Capital and the Economy	
ECON 28000	Industrial Organization	
Two Macroeconomics Methods courses chosen from:		200
ECON 19100	Economics for Everyone: Macro [+]	
ECON 13000	Introduction to Money and Banking	
or ECON 23000	Money and Banking	
ECON 13300	Introduction to the Macroeconomics of Monetary and Fiscal Policy	
ECON 13310	Introduction to Macroeconomic Analysis: A Data Driven Approach	
ECON 15010	Investments: From Economics to Finance	
ECON 15020	Trading: From Game Theory to Finance	
ECON 15030	Basics of Corporate, Banking and Investment Finance	
ECON 17100	Introduction to International Trade	
or ECON 27000	International Economics	
ECON 19300	Introduction to Issues and Methods in Macroeconomics	
ECON 19500	Practice of Risk Management and Investing	
ECON 23050	Artificial Intelligence, Innovation, and Growth	
ECON 23950	Economic Policy Analysis [*]	
ECON 25100	Financial Economics; Speculative Markets	
ECON 25120	Options and Volatility Products	
ECON 26010	Public Finance	
ECON 26030	The Economics of Socialism	
ECON 26610	The Economics of Cities and Regions	
Total Units		400

[+] Students must complete either ECON 19000 or ECON 19100 as one of the four required methods course. Students may not enroll in both ECON 19000 and ECON 19100.

[#] Students may count either ECON 10700 or ECON 20700, but not both, toward the 42 credits required for graduation.

[^] Students may count either ECON 11700 or ECON 21800, but not both, toward the 42 credits required for graduation.

[*] Students may count either ECON 13000 or ECON 23950, but not both, toward the 42 credits required for graduation.

[++] Students may count either ECON 14000 or ECON 24000, but not both, toward the 42 credits required for graduation.

Empirical Analysis

The objective of the empirical analysis component is to ensure that students who complete the major are comfortable carrying out data analysis in various forms. This requires that students gain familiarity with basic statistics and basic econometric methods. These courses will emphasize the application of empirical methods to relevant examples and develop essential computer skills.

ECON 11010	Introduction to Statistical Methods in Economics	100
or STAT 23400	Statistical Models and Methods	
or STAT 24400	Statistical Theory and Methods I	
or STAT 24410	Statistical Theory and Methods Ia	
ECON 11020	Introduction to Econometrics	100
or ECON 21020	Econometrics	
or ECON 21030	Econometrics - Honors	
Total Units		200

Perspectives

The perspectives requirement consists of one course that can come from any division in the university, other than the Griffin Department of Economics and the Booth School of Business. This requirement recognizes that successful careers require broad-based understanding of the markets and industries in which our students are likely to participate. This requirement is intended to facilitate the acquisition of sector-specific knowledge and/or job-specific skills that are likely to provide context for the economics and business training to which students will receive exposure while completing the specialization business economics. It is expected that students use this perspectives component as a stepping-stone to design a meaningful set of courses that complement their training in business economics.

It is important to emphasize that there are *many* courses across the University that students can use to satisfy the perspectives requirement. A list of courses pre-approved for this requirement may be found on the departmental website (https://economics.uchicago.edu/undergraduate-study/curriculum/business-economics-specialization/), but students may petition the Department of Economics to use other suitable courses. ECON, ECMA, and Chicago Booth (BUSN) courses may not be used to satisfy the perspectives requirement.

Electives

Students must take three business electives from the University of Chicago Booth School of Business, as defined below. In exceptional circumstances, a student may, by petition, use a course from outside the Chicago Booth pre-approved electives list below. Petitions must be submitted prior to course enrollment to be considered.

Courses in the University of Chicago Booth School of Business

The courses at Chicago Booth that students can use to meet the electives requirements are categorized in eight different "bundles." Courses in the table below with an asterisk (*) are also eligible for the Foundations of Business Education requirement; however, a course used to satisfy the core requirement in the major cannot be also counted as an elective. Students must complete four distinct Booth courses: one Foundations in Business Education and three electives. In order to expose students to different subfields in business education, the four Booth courses used to fulfill the core and elective requirements must be drawn from at least three of the thematic bundles listed below.

Not all Booth courses are offered every year. For current listings, reference the Business Economics Offerings (https://urldefense.com/v3/__https://www.chicagobooth.edu/-/media/non-booth-info/docs/bus-econ-offerings.pdf__;!!BpyFHLRN4TMTrA!86GFs8Y6aGDCINLaHFhhZem1a6qNYxqVh1tZ6otLCNXjwGoqHqOHTjbCIfZ6joW0nXupxRdTJslCbBNGoItFwgQbJU71wg$) on the Booth Business Economics website. (https://urldefense.com/v3/__https://www.chicagobooth.edu/offerings/taking-booth-classes/business-economics-courses__;!!BpyFHLRN4TMTrA!86GFs8Y6aGDCINLaHFhhZem1a6qNYxqVh1tZ6otLCNXjwGoqHqOHTjbCIfZ6joW0nXupxRdTJslCbBNGoItFwgQbJU71wg$)

Note: BUSN 2XXXX-level (undergraduate-level) versions of these courses will follow some College policies regarding registration, scheduling, grading, etc. The BUSN 3XXXX-level and above versions will be subject to Chicago Booth's academic and administrative policies. Consult the Chicago Booth website *(*https://www.chicagobooth.edu/programs/taking-courses-at-booth/faq/#beecf17b3e304bae93c50f4f595c27d6*) for details. Students who have taken a BUSN 2XXXX-level course cannot enroll in the 3XXXX-level (or higher) equivalent, and vice versa.*

CHICAGO BOOTH COURSES THAT MEET THE ELECTIVES REQUIREMENT

Accounting	
BUSN 20100	Financial Accounting (or BUSN 30000) *
BUSN 20101	Managerial Accounting (BUSN 30005) ^
BUSN 20140	Accounting and Financial Analysis (or BUSN 30116)
BUSN 20150	Financial Statement Analysis (or BUSN 30130)
BUSN 20170	Tax Strategies (or BUSN 30118)
BUSN 20180	Advanced Financial Analysis and Valuation for Global Firms (or BUSN 30131)
Entrepreneurship	
BUSN 20330	Building the New Venture (or BUSN 34103) *

BUSN 20340	Developing a New Venture (or BUSN 34104)
BUSN 20350	Entrepreneurial Discovery (or BUSN 34111)
BUSN 20355	Entrepreneurial Selling (or BUSN 34705)
BUSN 20920	Social Entrepreneurship and Innovation (or BUSN 34117)
Finance	
BUSN 20400	Investments (or BUSN 35000)
BUSN 20405	Financial Instruments (or BUSN 35100)
BUSN 20410	Corporation Finance (or BUSN 35200) *
Management	
BUSN 20701	Managing in Organizations (or BUSN 38001)
BUSN 20702	Managerial Decision Making (or BUSN 38002) *
BUSN 20710	Behavioral Economics (or BUSN 38120)
BUSN 20711	Choosing Leadership
BUSN 20715	Building Inclusive Organizations (or BUSN 38122)
Marketing	
BUSN 20600	Marketing Management (or BUSN 37000) *
BUSN 20610	Pricing Strategy (or BUSN 37202)
BUSN 20620	Data Driven Marketing (or BUSN 37103 or BUSN 37105)
Operations	
BUSN 20500	Operations Management (or BUSN 40000) *
BUSN 20510	Managerial Decision Modeling (or BUSN 36106)
BUSN 20520	Supply Chain Management (or BUSN 40101)
Statistics	
BUSN 20800	Big Data (or BUSN 41201) *
BUSN 20810	Machine Learning (or BUSN 41204)
BUSN 20820	Financial Econometrics (or BUSN 41203)
Strategy and the Business Environment	
BUSN 20200	Macroeconomics and the Business Environment (or BUSN 33050)
BUSN 20230	International Financial Policy (or BUSN 33502)
BUSN 20231	Economics in a Globalized World (or BUSN 33501)
BUSN 20232	Central Banks, Financial Institutions and the Business Environment
BUSN 20900	Competitive Strategy (or BUSN 42001) *
BUSN 20940	Business Ethics (or BUSN 33471)

* These courses are also eligible for the Foundations of Business Education requirement; however, a course used to satisfy the core requirement in the major cannot also be counted as an elective. Students must complete four distinct Chicago Booth courses: one Foundations of Business Education course and three electives. In order to expose students to different subfields in business education, the four Chicago Booth courses used to fulfill the core and elective requirements must be drawn from at least three of the thematic bundles listed here.

^ MBA course title change from Cost Analysis & Internal Controls to Internal Information for Strategic Decisions. Cannot enroll in BUSN 30005 if 30001 previously taken.

Petitions

Students in the specialization in business economics must complete two core courses in microeconomics and macroeconomics, one course in econometrics, and four methods courses in the Kenneth C. Griffin Department of Economics. In exceptional cases, students may petition for up to one outside courses to substitute toward these requirements by submitting a general petition along with the course syllabus for review by the Co-Directors. For an outside course to be approved, the department requires—and the student must provide—compelling evidence that the course uses economic methods as the primary mode of analysis (rather than treating the economy merely as a subject area). Petitions for courses offered by the Chicago Booth School of Business (BUSN prefix) will not be considered for these economics requirements. Petitions must be submitted to the department prior to course enrollment to be considered.

For any substitutions within the four BUSN course requirements of the business economics specialization, the petition is reviewed by the Booth School of Business. If a course does not fall within any of the bundles/categories (Accounting, Operations, Management, etc.) for BUSN electives, students may petition to have it counted toward their BUSN requirements. To petition for a non-approved course to count as a substitution in one of the bundles/categories, students may submit a online petition request form for

consideration: https://chicagobooth.az1.qualtrics.com/jfe/ (https://chicagobooth.az1.qualtrics.com/jfe/form/SV_diFzmZcOOh0aca9/)form/SV_diFzmZcOOh0aca9.

Students pursuing the business economics specialization may petition to count one course outside of the University of Chicago Department of Economics toward perspectives requirement. Business or economics courses will not be approved to satisfy the Perspectives requirement. Study abroad courses outside the University of Chicago Department of Economics may not be petitioned toward the economics core or methods requirements. Chicago Booth does not approve course substitutions from other departments or from other institutions. As such, study abroad courses may not be applied toward the BUSN course requirements of the business economics specialization. Petitions must be submitted to the department prior to course enrollment to be considered.

Summary of Requirements

For a summary of requirements for the BA in Economics with specialization in business economics, see below.

BA in Economics with Specialization in Data Science

The specialization in data science provides training in computation and data analysis beyond the basic methods discussed in the empirical methods sequence. The specialization in data science and the standard BA in economics share eight courses:

Two fundamentals courses:		200
MATH 13300 Elementary Functions and Calculus III OR MATH 15300 Calculus III OR MATH 16300 Honors Calculus III OR MATH 18300 Mathematical Methods in the Physical Sciences I		
MATH 15250 Mathematical Methods for Economic Analysis OR MATH 18400 Mathematical Methods in the Physical Sciences II OR MATH 20400 Analysis in Rn II OR MATH 20410 Analysis in RN II (accelerated) OR MATH 20800 Honors Analysis in Rn II		
One of the following:		300
ECON 20000-20100-20200	The Elements of Economic Analysis I-II-III	
ECON 20010-20110-20210	The Elements of Economic Analysis: Honors I-II-III	
One three-quarter empirical methods sequence:		300
MATH 19620 Linear Algebra (OR STAT 24300 Numerical Linear Algebra OR MATH 18500 Mathematical Methods in the Physical Sciences III OR MATH 20250 Abstract Linear Algebra OR MATH 20700 Honors Analysis in Rn I)		
STAT 23400 Statistical Models and Methods (OR STAT 24400 Statistical Theory and Methods I OR STAT 24410 Statistical Theory and Methods Ia)		
ECON 21020 Econometrics (OR ECON 21030 Econometrics - Honors)		
Total Units		800

The specialization in data science is designed to begin after completion of the core sequence and the empirical methods sequence. Students pursuing the specialization in data science are not required to complete ECON 23950 Economic Policy Analysis. Instead, they must complete basic training in computer science and at least two data science courses in the Department of Economics:

CMSC 14200	Introduction to Computer Science II	100
Two chosen from:		200
ECMA 31320	Applications of Econometric and Data Science Methods	
ECMA 31330	Econometrics and Machine Learning	
ECMA 31340	Big Data Tools in Economics	
ECMA 31350	Machine Learning for Economists	
ECMA 31360	Causal Inference	
ECMA 31370	Causal Analysis for Industry	
ECMA 31380	Causal Machine Learning	
Total Units		300

Students pursuing the specialization in data science must also complete two electives drawn from the following sets of courses:

At most one of:		100
ECON 21110	Applied Microeconometrics	
ECON 21031	Econometrics II-Honors	

ECMA 31000	Introduction to Empirical Analysis	
ECMA 31130	Topics in Microeconometrics	
At most one of:		100
ECON 21200	Time Series Econometrics	
STAT 26100	Time Dependent Data	
BUSN 20820	Financial Econometrics	
or BUSN 41203	Financial Econometrics	
ECMA 31100	Introduction to Empirical Analysis II	100
ECMA 31150	Econometric Methods for Macroeconomics	100
CMSC 23500	Introduction to Database Systems	100
CMSC 25025	Machine Learning and Large-Scale Data Analysis	100
CMSC 25300	Mathematical Foundations of Machine Learning	100
CMSC 25500	Introduction to Neural Networks	100
STAT 27400	Nonparametric Inference	100
STAT 27725	Machine Learning	100

Students who have entered the specialization in data science but no longer wish to pursue it must complete ECON 23950 Economic Policy Analysis and the necessary electives to satisfy the requirements of the standard track BA in economics. All economics courses (ECON and ECMA courses) completed in the pursuit of the specialization in data science will count toward the degree requirements of the standard track BA in economics.

Summary of Requirements

For a summary of requirements for the BA in economics with specialization in data science, see below.

BA in Economics with Specialization in Politics and Policy

The Specialization in Politics and Policy sits at the intersection of economics and public policy, combining the analytical rigor of economic theory with a clear-eyed understanding of political institutions, power, and governance. It goes beyond purely positive analysis to acknowledge that economic and policy questions are often inseparable from normative judgments about equality, efficiency, fairness, and social welfare. At the same time, it explicitly incorporates political constraints—such as institutional design, collective action, and incentives faced by policymakers—that are often abstracted away in standard economic models. The result is a framework for analyzing real-world problems that recognizes both how economies work and how policy choices are shaped, limited, and implemented within political systems.

The specialization in politics and policy is designed to accommodate students with diverse intellectual interests and methodological strengths. Students may pursue a more empirically oriented path, emphasizing data analysis, econometrics, and applied research on policy and political outcomes, or focus on mathematical and theoretical models that formalize the political–economic process and its strategic foundations. Because all tracks within the BA in Economics share a common core in economic fundamentals and empirical methods, students can easily move between specializations as their interests evolve, without sacrificing progress toward the degree or depth of training.

The specialization in politics and policy consists of five component parts:

1. **Foundations of Economics:** The economics core provides students with a rigorous foundation in microeconomic and macroeconomic theory, establishing the analytical language used throughout the degree. It develops disciplined economic reasoning about incentives, constraints, equilibrium, and efficiency that is essential for understanding both markets and policy outcomes. This shared foundation ensures coherence across specializations and allows students to engage confidently with advanced theoretical, empirical, and policy-oriented coursework.
2. **Foundations of Politics and Policy:** The politics and policy core takes an explicitly political economy approach—applying the methods of economic analysis to the study of political institutions, collective decision-making, public policy, and governance. It equips students to analyze how policies are formed, implemented, and constrained by political incentives, power, and institutional structures, and the attendant normative trade-offs. As such, it bridges abstract economic models and real-world policy decisions.
3. **Methods:** The methods component provides students with formal tools for modeling economic and political processes, including mathematical, statistical, and game-theoretic techniques. It emphasizes precision, logical structure, and the ability to translate substantive questions into tractable analytical frameworks. This training allows students to engage deeply with theoretical work and to move fluidly between abstract models and empirical applications.
4. **Empirical Analysis:** The empirical analysis component trains students to evaluate economic and political questions using real-world data. It emphasizes econometric techniques, causal inference, and the interpretation of evidence, enabling students to test theoretical predictions and assess policy effectiveness.

This component equips students with practical skills for research, policy analysis, and data-driven decision-making across both academic and applied settings.

5. **Electives:** The electives component allows students to tailor the degree to their individual interests within economics, political economy, and related fields. Students can deepen expertise in specific policy areas, empirical applications, or theoretical topics, or explore complementary perspectives from other disciplines. This flexibility encourages intellectual exploration while allowing students to integrate and apply the core tools of the degree to substantive questions they find most compelling. Electives are grouped into three bins that capture the distributional requirements embedded in the degree.

Foundations of Economics

The economics core component is designed to introduce students to the tools of basic economic analysis. These courses include fundamental course work in microeconomics and macroeconomics. These courses introduce theory but emphasize the application of these tools to standard problems that students are likely to encounter as they carry out their professional activities. The core component consists of three courses:

Economics Core		
ECON 19000	Economics for Everyone: Micro	100
or ECON 19100	Economics for Everyone: Macro	
or ECON 20000	The Elements of Economic Analysis I	
or ECON 20010	The Elements of Economic Analysis I Honors	
ECON 10000	Principles of Microeconomics	100
or ECON 20100	The Elements of Economic Analysis II	
or ECON 20110	The Elements of Economic Analysis II Honors	
ECON 10200	Principles of Macroeconomics	100
or ECON 20200	The Elements of Economic Analysis III	
or ECON 20210	The Elements of Economic Analysis III Honors	
Total Units		300

Foundations of Politics and Policy

The Politics and Policy Core provides a systematic framework for understanding how economic ideas are translated into collective decisions and implemented through political institutions. Through the Politics and Policy sequence, students study how normative goals, strategic interaction, institutional design, and collective action shape policy outcomes, explicitly modeling the political constraints that condition real-world policymaking. These courses equip students with formal tools to analyze bargaining, leadership, incentives, and organizational behavior, complementing economic theory by explaining why efficient or desirable policies may fail—or succeed—in practice. Together, they ensure that students can move seamlessly from economic analysis to policy design, with a clear understanding of the political processes that govern implementation and outcomes.

Harris Core		
PBPL 22100	Politics and Policy	100
Political Leadership and Governance		100
Total Units		200

Methods

Game theory is a foundational method in political economy because policy outcomes emerge from strategic interactions among individuals, groups, and institutions with competing objectives. It provides a formal language for analyzing bargaining, collective decision-making, incentives, and commitment problems that cannot be captured by purely competitive market models. By requiring training in game theory, the degree equips students to model political constraints explicitly and to understand how institutional design shapes behavior and policy outcomes.

Economics Methods		
ECON 10700	Introductory Game Theory	100
or ECON 20700	Game Theory and Economic Applications	
Total Units		100

Empirical Analysis

Empirical analysis is essential to the study of political economy because it allows students to evaluate how economic and political theories perform in real-world settings. By working with data, students learn to test hypotheses about policy impacts, institutional performance, and political behavior, distinguishing causal relationships from correlation. This empirical grounding disciplines normative and theoretical claims, ensuring that analyses of political and economic processes are informed by evidence and attentive to practical constraints.

ECON 11010	Introduction to Statistical Methods in Economics	100
or ECON 21010	Statistical Methods in Economics	
ECON 11020	Introduction to Econometrics	100
or ECON 21020	Econometrics	
or ECON 21030	Econometrics - Honors	
Total Units		200

Electives

Electives are intentionally distributed across three distinct areas: economics, politics and policy, and courses outside these disciplines. This structure ensures that students maintain depth in economic analysis, gain substantive exposure to policy institutions and practice, and broaden their perspective through complementary fields. By requiring balance across these bins, the program reinforces the interdisciplinary character of political economy while encouraging students to connect economic reasoning to policy design and wider social contexts.

Students must take five electives to complete the specialization in politics and policy. As described below at least two of these courses must come from the Economics list and at least two from Politics and Policy list. The fifth course can come from any of the courses listed as approved electives in the table below. In exceptional circumstances, a student may, by petition, use a course from outside Harris Public Policy and Griffin Economics as, at most, one elective. To be considered, petitions must be submitted prior to course enrollment. Courses from the Economics list may not be used to satisfy the two Politics and Policy courses and vice versa.

Two Economics bin electives chosen from:		200
ECON 11850	Behavioral Economics and Welfare Analysis	
ECON 16550	The Climate and Growth Challenge	
ECON 17100	Introduction to International Trade	
ECON 20520	Formal Models of Political Economics	
ECON 23410	Economic Growth	
ECON 23950	Economic Policy Analysis	
ECON 24450	Inequality and the Social Safety Net: Theory, Empirics, and Policies	
ECON 26010	Public Finance	
ECON 26030	The Economics of Socialism	
ECON 26740	Climate Crossroads: Policy, Diplomacy, and the Global Future	
ECON 27000	International Economics	
Two Politics and Policy bin electives chose from:		200
PBPL 27818	Philosophical Foundations of Public Policy	
PBPL 25600	Why We Fight: The Roots of War and the Paths to Peace	
PBPL 25585	The Chinese Economy,Chinese Economy	
PBPL 25510	Evidence in Health Policy	
PBPL 28728	Climate Change and Society: Human Impacts, Adaptation, and Policy Solutions	
PBPL 25550	Economic Development and Policy	
PBPL 23215	Poverty and Public Policy	
PBPL 28829	Artificial Intelligence for Public Policy	
PBPL 28030	Higher Education Policy	
Conservative Movement in the US		
Crrime Prevention		
Political Polarization in the US		
The Role of the Government in the Economy		
Cost Benefit Analysis		
One Shared bin elective chosen from:		100
ECON 11600	Experimental Design	
ECON 21800	Experimental Economics	
ECON 23050	Artificial Intelligence, Innovation, and Growth	
MATH 15250	Mathematical Methods for Economic Analysis	
PBPL 28791	Behavioral Science and Public Policy	
PBPL 28029	Education Policy	
PBPL 25120	Child Development and Public Policy	

PBPL 25695	The Workplace and Family Policy	
Total Units		500

Summaries of Requirements

- BA in Economics, Standard Track
- BA in Economics with Specialization in Business Economics
- BA in Economics with Specialization in Data Science
- BA in Economics with Specialization in Politics and Policy

Summary of Requirements: BA in Economics, Standard Track

GENERAL EDUCATION		
One of the following:		200
MATH 13100-13200	Elementary Functions and Calculus I-II	
MATH 15100-15200	Calculus I-II *	
MATH 16100-16200	Honors Calculus I-II	
MATH 16110-16210	Honors Calculus I-II (IBL)	
Total Units		200
MAJOR		
One of the following:		100
MATH 13300	Elementary Functions and Calculus III	
MATH 15300	Calculus III *	
MATH 16300	Honors Calculus III	
MATH 16310	Honors Calculus III (IBL)	
MATH 18300	Mathematical Methods in the Physical Sciences I	
One of the following:		300
ECON 20000-20100-20200	The Elements of Economic Analysis I-II-III	
ECON 20010-20110-20210	The Elements of Economic Analysis: Honors I-II-III	
MATH 15250	Mathematical Methods for Economic Analysis **	100
or MATH 18400	Mathematical Methods in the Physical Sciences II	
or MATH 20400	Analysis in Rn II	
or MATH 20410	Analysis in Rn II (accelerated)	
or MATH 20800	Honors Analysis in Rn II	
MATH 19620	Linear Algebra	100
or MATH 18500	Mathematical Methods in the Physical Sciences III	
or MATH 20250	Abstract Linear Algebra	
or STAT 24300	Numerical Linear Algebra	
or MATH 20700	Honors Analysis in Rn I	
STAT 23400	Statistical Models and Methods	100
or STAT 24400	Statistical Theory and Methods I	
or STAT 24410	Statistical Theory and Methods Ia	
ECON 21020	Econometrics	100
or ECON 21030	Econometrics - Honors	
ECON 23950	Economic Policy Analysis	100
or ECON 23200	Topics in Macroeconomics	
or ECMA 33220	Introduction to Advanced Macroeconomic Analysis	
or ECMA 33330	Introduction to Dynamic Economic Modeling	
Four electives +		400
Total Units		1300

* Credit may be granted by examination and completion of a higher level proof-based mathematics course (MATH 15910 or MATH 20250 or higher).

** Students taking the MATH 15000s calculus sequence must complete MATH 15250 prior to enrollment in ECON 20000 or ECON 20010. Students taking MATH 13000s calculus sequence must complete MATH 13300 prior to enrollment in ECON 20000/20010 and may take MATH 15250 concurrently with ECON 20000/20010.

+ These courses must include at least two economics courses numbered higher than ECON 20210 and must follow guidelines in the preceding Electives section. Advanced undergraduate students may use economics master's-level (ECMA) courses to satisfy the major elective requirements. (Note: ECON 10200 may be used to fulfill one economics elective requirement for students who matriculated in 2016–17 or later.)

Summary of Requirements: BA in Economics with Specialization in Business Economics

GENERAL EDUCATION

Any course or sequence of courses that fulfills the general education requirement in the mathematical sciences		

Core

ECON 10000	Principles of Microeconomics	100
or ECON 20000	The Elements of Economic Analysis I	
or ECON 20010	The Elements of Economic Analysis I Honors	
ECON 10200	Principles of Macroeconomics ^	100
or ECON 20200	The Elements of Economic Analysis III	
or ECON 20210	The Elements of Economic Analysis III Honors	
One Foundations of Business Economics course chosen from:		100
BUSN 20100	Financial Accounting (or BUSN 30000)	
BUSN 20330	Building the New Venture (or BUSN 34103)	
BUSN 20400	Investments (or BUSN 35000)	
BUSN 20410	Corporation Finance (or BUSN 35200)	
BUSN 20702	Managerial Decision Making (or BUSN 38002)	
BUSN 20600	Marketing Management (or BUSN 37000)	
BUSN 20500	Operations Management (BUSN 40000)	
BUSN 20800	Big Data (or BUSN 41201)	
BUSN 20900	Competitive Strategy (or BUSN 42001)	
Two Microeconomic Methods courses chosen from:		200
ECON 19000	Economics for Everyone: Micro +	
ECON 10700	Introductory Game Theory #	
or ECON 20700	Game Theory and Economic Applications	
ECON 11600	Experimental Design	
ECON 11700	Introduction to Behavioral and Experimental Economics ^	
or ECON 21800	Experimental Economics	
ECON 11850	Behavioral Economics and Welfare Analysis	
ECON 14000	Introduction to Labor Economics ++	
or ECON 24000	Labor Economics	
ECON 14050	Introduction to Labor Economics and the Firms	
ECON 16040	Introduction to Human Capital	
ECON 16550	The Climate and Growth Challenge	
ECON 16560	Consumers, Firms, and the Environment	
ECON 16700	Introduction to Economics of Education	
ECON 17700	Introduction to Health Economics	
ECON 18010	Introduction to Managerial Microeconomics	
ECON 19200	Introduction to Issues and Methods in Microeconomics	
ECON 20100	The Elements of Economic Analysis II	
or ECON 20110	The Elements of Economic Analysis II Honors	
ECON 20520	Formal Models of Political Economics	
ECON 24050	Labor Economics and Public Policy	
ECON 26040	Human Capital and the Economy	
ECON 28000	Industrial Organization	

Two Macroeconomic Methods courses chosen from:		200
ECON 19100	Economics for Everyone: Macro [+]	
ECON 13000	Introduction to Money and Banking	
or ECON 23000	Money and Banking	
ECON 13300	Introduction to the Macroeconomics of Monetary and Fiscal Policy	
ECON 13310	Introduction to Macroeconomic Analysis: A Data Driven Approach	
ECON 15030	Basics of Corporate, Banking and Investment Finance	
ECON 15010	Investments: From Economics to Finance	
ECON 15020	Trading: From Game Theory to Finance	
ECON 17100	Introduction to International Trade	
or ECON 27000	International Economics	
ECON 19300	Introduction to Issues and Methods in Macroeconomics	
ECON 19500	Practice of Risk Management and Investing	
ECON 23050	Artificial Intelligence, Innovation, and Growth	
ECON 23950	Economic Policy Analysis [*]	
ECON 25100	Financial Economics; Speculative Markets	
ECON 25120	Options and Volatility Products	
ECON 26010	Public Finance	
ECON 26030	The Economics of Socialism	
ECON 26610	The Economics of Cities and Regions	
Empirical Analysis		
ECON 11010	Introduction to Statistical Methods in Economics	100
or STAT 23400	Statistical Models and Methods	
or STAT 24400	Statistical Theory and Methods I	
or STAT 24410	Statistical Theory and Methods Ia	
ECON 11020 Introduction to Econometrics		100
or ECON 21020 Econometrics		
or ECON 21030 - Econometrics - Honors		
One Perspectives elective		100
Three electives from the University of Chicago Booth School of Business [§]		300
Total Units		1300

[+] Students must complete either ECON 19000 or ECON 19100 as one of the four required methods course. Students may not enroll in both ECON 19000 and ECON 19100.

[#] Students may count either ECON 10700 or ECON 20700, but not both, toward the 42 credits required for graduation.

[^] Students may count either ECON 11700 or ECON 21800, but not both, toward the 42 credits required for graduation.

[*] Students may count either ECON 13000 or ECON 23950, but not both, toward the 42 credits required for graduation.

[++] Students may count either ECON 14000 or ECON 24000, but not both, toward the 42 credits required for graduation.

[§] Students must take Chicago Booth courses in at least three thematic "bundles." See Electives section for details.
Note that BUSN 2XXXX-level (undergraduate-only) versions of these courses will follow some College policies regarding registration, scheduling, grading, etc. The BUSN 3XXXX-level versions will be subject to Chicago Booth academic and administrative policies. Consult the Chicago Booth website (https://www.chicagobooth.edu/programs/taking-courses-at-booth/faq/#beecf17b3e304bae93c50f4f595c27d6) for details.

Summary of Requirements: BA in Economics with Specialization in Data Science

GENERAL EDUCATION

One of the following:		200
MATH 13100-13200	Elementary Functions and Calculus I-II	
MATH 15100-15200	Calculus I-II [*]	
MATH 16100-16200	Honors Calculus I-II	

MATH 16110-16210	Honors Calculus I-II (IBL)	
Total Units		200
MAJOR		
MATH 13300	Elementary Functions and Calculus III	100
or MATH 15300	Calculus III *	
or MATH 16300	Honors Calculus III	
or MATH 16310	Honors Calculus III (IBL)	
or MATH 18300	Mathematical Methods in Physical Sciences I	
MATH 15250	Mathematical Methods for Economic Analysis	100
or MATH 18400	Mathematical Methods in the Physical Sciences II	
or MATH 20400	Analysis in Rn II	
or MATH 20410	Analysis in Rn II (accelerated)	
or MATH 20800	Honors Analysis in Rn II	
One of the following:		300
ECON 20000-20100-20200	The Elements of Economic Analysis I-II-III	
ECON 20010-20110-20210	The Elements of Economic Analysis: Honors I-II-III	
MATH 19620	Linear Algebra	100
or STAT 24300	Numerical Linear Algebra	
or MATH 18500	Mathematical Methods in the Physical Sciences III	
or MATH 20250	Abstract Linear Algebra	
or MATH 20700	Honors Analysis in Rn I	
STAT 23400	Statistical Models and Methods	100
or STAT 24400	Statistical Theory and Methods I	
or STAT 24410	Statistical Theory and Methods Ia	
ECON 21020	Econometrics	100
or ECON 21030	Econometrics - Honors	
CMSC 14200	Introduction to Computer Science II	100
Two Data Science courses chosen from:		200
ECMA 31320	Applications of Econometric and Data Science Methods	
ECMA 31330	Econometrics and Machine Learning	
ECMA 31340	Big Data Tools in Economics	
ECMA 31350	Machine Learning for Economists	
ECMA 31360	Causal Inference	
ECMA 31370	Causal Analysis for Industry	
ECMA 31380	Causal Machine Learning	
Two Electives:		200
At most one of: ECON 21110 Applied Microeconomics, ECON 21031 Econometrics II-Honors, ECMA 31000 Introduction to Empirical Analysis I, ECMA 31130 Topics in Microeconomics		
At most one of: ECON 21200 Time Series Analysis, STAT 26100 Time Dependent Data, BUSN 20820 Financial Econometrics (or BUSN 41203 Financial Econometrics)		
CMSC 23500	Introduction to Database Systems	
CMSC 25025	Machine Learning and Large-Scale Data Analysis	
CMSC 25300	Mathematical Foundations of Machine Learning	
CMSC 25500	Introduction to Neural Networks	
STAT 27400	Nonparametric Inference	
STAT 27725	Machine Learning	
Total Units		1300

* Credit may be granted by examination and completion of a higher level proof-based mathematics course (MATH 15910 or MATH 20250 or higher).

Summary of Requirements: BA in Economics with Specialization in Politics and Policy

Foundations of Economics		300
ECON 19000	Economics for Everyone: Micro	
or ECON 19100	Economics for Everyone: Macro	
or ECON 20000	The Elements of Economic Analysis I	
or ECON 20010	The Elements of Economic Analysis I Honors	
ECON 10000	Principles of Microeconomics	
or ECON 20100	The Elements of Economic Analysis II	
or ECON 20110	The Elements of Economic Analysis II Honors	
ECON 10200	Principles of Macroeconomics	
or ECON 20200	The Elements of Economic Analysis III	
or ECON 20210	The Elements of Economic Analysis III Honors	
Foundation of Politics and Policy		200
PBPL 22100	Politics and Policy	
Political Leadership and Governance		
Methods		100
ECON 10700	Introductory Game Theory	
or ECON 20700	Game Theory and Economic Applications	
Empirical Analysis:		200
ECON 11010	Introduction to Statistical Methods in Economics	
or ECON 21010	Statistical Methods in Economics	
ECON 11020	Introduction to Econometrics	
or ECON 21020	Econometrics	
or ECON 21030	Econometrics - Honors	
Electives		
Two Economics bin electives chosen from:		200
ECON 11850	Behavioral Economics and Welfare Analysis	
ECON 16550	The Climate and Growth Challenge	
ECON 17100	Introduction to International Trade	
ECON 20520	Formal Models of Political Economics	
ECON 23410	Economic Growth	
ECON 23950	Economic Policy Analysis	
ECON 24450	Inequality and the Social Safety Net: Theory, Empirics, and Policies	
ECON 26010	Public Finance	
ECON 26030	The Economics of Socialism	
ECON 26740	Climate Crossroads: Policy, Diplomacy, and the Global Future	
ECON 27000	International Economics	
Two Politics and Policy bin electives chosen from:		200
PBPL 27818	Philosophical Foundations of Public Policy	
PBPL 25600	Why We Fight: The Roots of War and the Paths to Peace	
PBPL 25585	The Chinese Economy,Chinese Economy	
PBPL 28728	Climate Change and Society: Human Impacts, Adaptation, and Policy Solutions	
PBPL 25550	Economic Development and Policy	
PBPL 28829	Artificial Intelligence for Public Policy	
PBPL 28030	Higher Education Policy	
Conservative Movement in the US		
Crime Prevention		
Political Polarization in the US		
The Role of the Government in the Economy		
Cost-Benefit Analysis		
One Shared bin elective chosen from:		100
ECON 11600	Experimental Design	

ECON 21800	Experimental Economics	
ECON 23050	Artificial Intelligence, Innovation, and Growth	
MATH 15250	Mathematical Methods for Economic Analysis	
PBPL 28791	Behavioral Science and Public Policy	
PBPL 28029	Education Policy	
PBPL 25120	Child Development and Public Policy	
PBPL 25695	The Workplace and Family Policy	
Total Units		1300

Grading

Successful completion of the economics major requires both a major GPA of 2.0 or higher *and* a minimum grade of C– in all courses counted for the major program. In addition, students majoring in economics must receive quality grades in all courses required as part of the major. Non-majors may take economics courses on a P/F basis; only grades of C– or higher constitute passing work.

Honors

To be considered for honors in economics, students must meet the following requirements: (1) a GPA of 3.5 or higher in the major and a GPA of 3.2 or higher overall, (2) participation in the honors workshop and sole authorship of an independent research paper on a topic in economics, and (3) a faculty sponsor's letter evaluating this independent research paper. For award of honors, the project must receive a grade of A or A–. At the beginning of the student's fourth year, the economics honors committee must have a letter from an economics faculty sponsor expressing willingness to oversee the student's writing of an independent research paper and recommending the student be admitted into the honors workshop program. Honors papers should be outgrowths of economics electives or research assistant work for the faculty sponsor.

Participation in the ECON 29800 Undergraduate Honors Workshop is mandatory throughout the year. Upon completion of the paper in the Spring Quarter, the student will then be retroactively registered for the course in the fourth-year quarter of the student's choosing. Plan for this retroactive registration with your College adviser.

The research paper, a transcript, and a recommendation letter from the faculty sponsor evaluating the independent research paper must be submitted to the undergraduate economics program office for consideration by the economics honors committee no later than the end of fourth week of the quarter in which the student plans to graduate. Students wishing to qualify for honors should (1) engage in preparatory course work in the area of interest no later than Spring Quarter of their third year and (2) consult with the program advisers no later than Winter Quarter of their third year.

This program may accept a BA paper or project used to satisfy the same requirement in another major if certain conditions are met and with the consent of the other program chair. Approval from both program chairs is required. Students should consult with the chairs by the earliest BA proposal deadline (or by the end of third year, when neither program publishes a deadline). A consent form, to be signed by both chairs, is available from the College adviser. It must be completed and returned to the College adviser by the end of Autumn Quarter of the student's year of graduation.

Preparation for PhD Programs in Economics

Students preparing to pursue a PhD program in economics should complete advanced course work in economics, mathematics, statistics, and computer science. The real analysis sequence offered by the Mathematics Department, MATH 20300-20400-20500 Analysis in Rn I-II-III (or its honors variant MATH 20700-20800-20900 Honors Analysis in Rn I-II-III) contains material that is particularly important for economics graduate school. Students who used MATH 13300 Elementary Functions and Calculus III or MATH 15300 Calculus III to fulfill the calculus requirement will need to take MATH 15910 Introduction to Proofs in Analysis to transition into the real analysis sequence. Completion of this course work allows students to participate in higher level electives that may also be helpful for their chosen path of study in graduate school.

Advanced economics undergraduates are encouraged to take advanced-level economics and economics master's-level (ECMA) courses according to their research interests. For more information, consult with juliew@uchicago.edu.

Completion of either STAT 24400 Statistical Theory and Methods I or STAT 24410 Statistical Theory and Methods Ia and either MATH 20250 Abstract Linear Algebra or STAT 24300 Numerical Linear Algebra will allow students to continue their training in statistics and econometrics at an advanced level.

Increasingly, graduate programs expect students to have sophisticated programming skills. Completion of CMSC 14100 Introduction to Computer Science I and CMSC 14200 Introduction to Computer Science II is strongly encouraged.

In addition, students who are interested in pursuing graduate study are encouraged to take appropriate courses from other departments in the social sciences to obtain a well-rounded perspective of their areas of interest.

Students are encouraged to seek research assistant jobs and may self-subscribe to the Research Assistant Jobs (https://lists.uchicago.edu/web/info/chicago_economics-researchasst/) listhost to receive updates on job postings.

Provisional and early final grades are not given for economics PhD courses. Economics graduate courses should not be taken in the student's graduating quarter unless the student will have completed all forty-two credits required for graduation, not counting the economics graduate course, and all requirements for all majors.

It is important that such students consult in spring of the second year with one of the directors of the undergraduate program to design a plan of course work and research. Contact juliew@uchicago.edu for appointments.

Application to BA/MA Programs

In order to receive approval to apply for a BA/MA program, students intending to complete the major in economics must submit the following to the program Co-Directors: the Approval to Apply for BA/MA Program form; a copy of their transcript; a full, tentative course plan for their third year and BA/MA year; and a brief description of the field and topic of their MA thesis (If applying to Research Intensive Track).

Students who have not yet completed all the requirements of the economics major at the beginning of their fourth year must complete the remaining courses in compliance with the rules of the major as stipulated in the College Catalog published in the year of their matriculation. BA/MA students may use ECMA courses (ECMA 3xxxx or higher) to satisfy requirements of the undergraduate degree. Graduate courses in other departments may also be used subject to the rules stipulated in the College Catalog. These courses require a petition that must be submitted prior to enrollment in the course.

Successful completion of the MA thesis for those accepted to the Research Intensive Track may also be applied to the requirements for graduation with honors in the undergraduate major in economics as outlined in the College Catalog. The economics BA thesis is not a requirement for successful completion of the undergraduate economics major. If a student writes an MA thesis and wants to submit it for departmental honors, then the student must submit the full thesis by the deadline for the undergraduate honors thesis (typically Friday of Week 4 of Spring Quarter). If, in addition, a BA/MA student wants to receive credit for ECON 29800 Undergraduate Honors Workshop, then the student must attend the workshop offered during Autumn Quarter and register for it per the rules set forth in the College Catalog.

Economics Courses

ECON 10000. Principles of Microeconomics. 100 Units.
This course introduces the principles and applications of price theory, which is a fundamental framework to analyze the decision-making of individuals and firms. The course is designed to develop problem-solving skills, both analytically and numerically, for students to be successful in subsequent coursework in the major. Coverage includes consumer theory, producer theory, determinants of demand and supply, market structures, equilibrium and welfare analysis, government intervention, international trade policy, and market failure and externalities. Students may substitute "Econ 20000: The Elements of Economic Analysis I" for this course in the business economics track.
Instructor(s): M. Lee; T. Yehoshua-Sandak, F. Ersoy, M. Brown Terms Offered: Autumn Winter

ECON 10200. Principles of Macroeconomics. 100 Units.
Building on the analytical framework developed in Econ 10000, this course introduces macroeconomic theory and its applications in public policy. Coverage includes measurements, the determination of income, output, unemployment and inflation, long-run economic growth, business cycles, financial market and banking, monetary policy, fiscal policy, international trade and finance, and history of thought. Students may substitute "Econ 20200: The Elements of Economic Analysis III" for this course in the business economics track.
Instructor(s): K. Kuevibulvanich; R. Zhao; O. Galvez-Soriano, T. Yehoshua-Sandak Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010

ECON 10700. Introductory Game Theory. 100 Units.
How should one bid at an auction in order to win at the lowest possible hammer price? How do firms behave when they possess market power but also face competition? Why do companies engage in R&D races in order to release their new products sooner than their competitors? Why do the Republicans and the Democrats almost always ended up choosing moderates as their party nominees in presidential races? To what extent can the veto power of presidents allow them to influence legislative outcomes? To answer these questions, we study Games of Strategies, and explore how lessons learned from such games can guide one's thinking in everyday strategic interactions.
Instructor(s): R. Fang, T. Yehoshua-Sandak, T. Hersey Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770] toward the 42 credits required for graduation.

ECON 11010. Introduction to Statistical Methods in Economics. 100 Units.
This course provides a solid foundation in probability and statistics for economists. We emphasize topics needed for further study of econometrics in ECON 11020.
Instructor(s): M. Ramos Terms Offered: Autumn Spring
Prerequisite(s): ECON 10000/20000/20010 and ECON 10200/20200/20210

ECON 11020. Introduction to Econometrics. 100 Units.
The objective of this course is to introduce students to the practice of econometrics. The course will focus on the use of multiple regression as a tool to establish causal relations. The course emphasizes all steps of the process of empirical research: data collection, analysis, and presentation (both written and oral). Multiple examples of this process will be discussed and students will be expected to read and evaluate existing research. Students will apply the techniques discussed in class to a topic of their choosing. They will write a paper and present results to the class.
Instructor(s): Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010 and ECON 10200/20200/20210; ECON 11010 or ECON 21010 or STAT 22000 or STAT 23400 or STAT 24400

ECON 11300. Correlation or Causation? Applied Causal Reasoning in Economics. 100 Units.
Every day we are surrounded by claims about what causes what: from "minimum wages raise unemployment levels" to "new supplement in the market improves focus and grades." But how do we know which of these claims are true? In a world with abundance of data, the challenge is not finding information, but correctly assessing patterns from the real world. This course gives you the tools to do exactly that. You will learn how economists separate coincidence from real cause-and-effect using modern techniques that power today's most influential research in the field.Throughout the program, you will explore real-world questions, work hands-on with data, and practice methods used to evaluate everything from education policies to health interventions. The course builds toward a collaborative class paper, where you will investigate a causal question and present your findings. By the end of this course, you will have the foundational skills beyond only understanding the difference between correlation and causation - you will know how to test it yourself. These skills will stay with you well beyond the classroom, helping you make sense of the news, analyze studies you encounter online, and succeed in future college-level coursework."
Terms Offered: Summer

ECON 11310. Big Data and Better Decisions. 100 Units.
This course will introduce students to advanced methods for data driven decision making with an emphasis on business applications. Students will learn how to build and interpret models that address two fundamental categories of business questions: (i) causal analysis and (ii) forecasting and prediction. The first portion of the course will cover experimental design, as well as non-experimental causal inference (e.g. matching, fixed effects, differences-in-differences, synthetic control). The second portion of the course will focus on machine learning topics including linear regularization, cross validation, tree models, random forests and boosting. The course will also explore cutting edge methods at the intersection of causal inference and machine learning. Heavy emphasis will be placed on discussion of real examples and business applications of these methodologies. The course work will include writing code and analyzing data in R to learn how these techniques are implemented in practice.
Instructor(s): A. Root Terms Offered: Not offered in 2025-2026
Prerequisite(s): ECON 10000/20000/20010 and ECON 11020/21020/21030

ECON 11600. Experimental Design. 100 Units.
The course equips students with the necessary skills to design and execute experiments effectively. In the first part of the course, students will learn why experiments are conducted and explore different types of experiments along with their respective advantages and disadvantages. Students will gain insights into choosing appropriate incentive structures and appropriate sample sizes. The course addresses critical issues, including internal and external validity, scalability concerns, and the risks of P-hacking and multiple hypothesis testing. Students will also learn about Institutional Review Board procedures. In the second part of the course, students will learn how to measure time preferences, risk preferences, subjective expectations, other-regarding preferences, competitiveness, and discrimination.
Instructor(s): F. Ersoy Terms Offered: Spring
Prerequisite(s): Econ 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 11700. Introduction to Behavioral and Experimental Economics. 100 Units.
This is an introductory course to experimental economics and on how to gather your own data using experimental methods to answer important economic questions. This methodology will be applied to learn the main topics in behavioral economics that leverages psychological insights to decision making and its effects on markets. Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): M. Lee Terms Offered: Not offered in 2025-2026
Prerequisite(s): ECON 10000 or ECON 19800 or ECON 20000 or ECON 20010
Note(s): Students may count either ECON 11700 or ECON 21800, but not both, toward the 42 credits required for graduation.

ECON 11710. The Psychology of Negotiation. 100 Units.
Negotiation is ubiquitous in interpersonal interactions, from making plans for a trip with friends or family, to determining working conditions with an employer, to managing international conflicts. In this course we examine the structure of different negotiations and the psychology that governs the processes and outcomes of a negotiation. For instance, we consider the role of perceptions, expectations, intuitions, and biases. We evaluate the role of information processing, modes of communication, and power in influencing a negotiated outcome. We see how the psychology of trust, reciprocity, fairness, cooperation, and competition can affect our ability to benefit from an exchange or contribute to the escalation of conflict. To better understand the dynamics of the negotiation process, we learn both through engaging in a variety of negotiation role-plays and relating these experiences to research findings. Third- or fourth-year students only. Priority will be given to fourth-year students.
Instructor(s): B. Keysar Terms Offered: Autumn
Equivalent Course(s): PSYC 25700

ECON 11850. Behavioral Economics and Welfare Analysis. 100 Units.
This course studies economic approaches to welfare analysis when people do not choose what is best for themselves. Students will extend standard economic models to accommodate psychological phenomena like overoptimism and inattention, focusing on implications for welfare analysis. They will also learn about modern empirical methods for measuring these phenomena in the real world. The course applies these theoretical and empirical methods to the welfare analysis of several policies, including: the taxation of sugary beverages, bans on so-called "junk fees," and compulsory savings programs (like the U.S. social security system). Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): M. Brown Terms Offered: Autumn Winter
Prerequisite(s): [ECON 10000 or ECON 20000 or ECON 20010] and [ECON 11010 or STAT 22000 or STAT 23400 or STAT 24400]
Note(s): This course may fulfill the microeconomics methods requirement of the business economics specialization.

ECON 12210. Economic History II: The Early Modern World, circa 1300-1800. 100 Units.
This course both describes preindustrial economic life and weighs the models used to explain fundamental changes to it. We will begin by describing some of the basic structures that determined patterns of production, exchange, and consumption in a period of low and easily reversible growth. These include agricultural productivity, demographic constraints, modes of transportation, and the social structures that governed the distribution of what little surplus premodern societies produced. Turning to the sources of economic dynamism that may have contributed to later industrialization, we will first examine the growth of long-distance trade networks starting in the late fourteenth century. How were traditional economies characterized by limited movement stimulated by the circulation of people, goods, and money from afar? We will then move to a discussion of the factors leading to (or frustrating) transformational patterns of economic growth: agricultural productivity, institutions, "proto-industrial" production in an era of limited urban growth, and changing norms of consumption. This course is part of the College Course Cluster program: Economic History, from Sumer to the Global World.
Instructor(s): P. Cheney and K. Pomeranz Terms Offered: Spring
Equivalent Course(s): HIST 19402

ECON 12410. Pathways in Economics. 100 Units.
This program introduces students to the approaches to economic research and experimentation that make UChicago a world leader in the field. Full-time lecturers in the Department of Economics teach classes on topics in macroeconomics, microeconomics, game theory, and field experiments, which are supplemented by guest lectures delivered by preeminent UChicago faculty in economics and other departments whose research applies the tools and insights of the field in new and exciting ways. Participants can apply what they hear about in lectures during small group discussion sections facilitated by a team of outstanding current UChicago students, as well as in labs and site visits to locations such as the Federal Reserve Bank of Chicago.
Terms Offered: Summer

ECON 12411. Pathways in Economics C. 100 Units.
This program introduces students to the approaches to economic research and experimentation that make UChicago a world leader in the field. Full-time lecturers in the Department of Economics teach classes on topics in macroeconomics, microeconomics, game theory, and field experiments, which are supplemented by guest lectures delivered by preeminent UChicago faculty in economics and other departments whose research applies the tools and insights of the field in new and exciting ways. Participants can apply what they hear about in lectures during small group discussion sections facilitated by a team of outstanding current UChicago students, as well as in labs and site visits to locations such as the Federal Reserve Bank of Chicago.
Terms Offered: Summer

ECON 12412. A Survey of Chicago Economics. 50 Units.
This two-week program will provide an introduction to UChicago-style, rigorous economics education; it is open only to approved visiting third-year students from Universidad Panamericana. Led by a team of full-time lecturers from the Department of Economics, this course will explore topics in four foundational areas: price theory, game theory, experimental economics, and macroeconomics. Participants will also develop skills that

will prepare them for further graduate study or other professional pursuits, such as interviewing, networking, and academic and professional communications. Evening and weekend residential program activities will enable students to experience American life and culture and explore the vibrant city of Chicago. Throughout the program, students will have the opportunity to practice both academic and informal spoken English.
Terms Offered: Summer

ECON 12413. A Survey of Chicago Economics and its Business Applications. 000 Units.
This two-week program will provide an introduction to UChicago-style, rigorous economics education, as well as its business applications. Fulltime lecturers in the Department of Economics will explore topics in four foundational areas: price theory, game theory, experimental economics, and macroeconomics. Evening and weekend residential program activities will enable students to experience American life and culture and explore the vibrant city of Chicago. Throughout the program, students will have the opportunity to practice both academic and informal spoken English.
Terms Offered: Summer

ECON 13000. Introduction to Money and Banking. 100 Units.
The course focuses on monetary policy and central bank's attempts to stabilize prices and promote maximum sustainable economic growth. Topics include the structure of the Federal Reserve, the conduct of monetary policy, the term structure of interest rates, risk valuation, management of banking, and financial crises.
Instructor(s): R. Zhao Terms Offered: Spring Winter
Prerequisite(s): Econ 10200/19900/20200/20210
Note(s): Students may not receive credit for both ECON 13000 and ECON 23950.

ECON 13010. Central banking history. 100 Units.
This course canvases topics in the long history of central banking. How does the law construct money? What are the economic mechanics of liquidity provision? and what political role have central banks played in nations and empires? Readings from historians, political scientists, legal scholars, economists, and anthropologists will explore the origins and evolution of central banking from the early modern period to today.
Instructor(s): Nic Johnson
Prerequisite(s): ECON 10200
Equivalent Course(s): HIST 19903, LLSO 25750

ECON 13110. Household Finance: Theory and Applications. 100 Units.
This course will examine the choices households make about important financial decisions and how these individual choices can impact the aggregate economy. Each week, basic predictions from economic theory will be discussed and compared with empirical findings. Topics will include: asset market participation and household portfolio choice; human capital and student loans; housing and mortgages; retirement planning; credit card debt; payday loans; and the gig/sharing economy. Focus will also be placed on government policies affecting these topics, including so-called household financial engineering, the creation of Government Sponsored Enterprises (GSEs) like "Fannie" and "Freddie," and regulatory agencies like the Consumer Financial Protection Bureau (CFPB). The course will provide an introduction to structural modeling for conducting policy counterfactuals. Assessment will be based on problem sets, a midterm and a final. These problem sets will require students to work in R, Stata or other statistical package of the student's choice (with permission of instructor).
Instructor(s): D. Koustas Terms Offered: Spring
Prerequisite(s): Prerequisite(s): PBPL 20000 (PBPL 22200 preferred) or ECON 20000 and one undergraduate course in quantitative research methods (Statistics or Econometrics) or the equivalent or consent of the instructor.
Equivalent Course(s): PBPL 28528

ECON 13210. Introduction to Macroeconomic Models. 100 Units.
This course offers a comprehensive exploration of neoclassical macroeconomic models. The course is divided into five key modules: (i) economic growth and production, (ii) consumption and savings, (iii) business cycles and unemployment, (iv) fiscal policy, and (v) monetary policy and forecasting. Throughout each module, we extensively utilize relevant data to enhance the understanding of theoretical concepts. By the end of the course, students will be able to interpret macroeconomic news and articles and analyze policies through a model-based framework.
Terms Offered: Summer

ECON 13300. Introduction to the Macroeconomics of Monetary and Fiscal Policy. 100 Units.
This course examines monetary and fiscal issues in the macroeconomy. The first part of the course will focus on long-run topics in monetary economics, such as the nature of a monetary economy, inflation, the quantity theory of money, and the welfare cost of inflation. The second part of the course will focus on the macroeconomic implications of government expenditure, supply side economics, the Laffer curve, and the Ricardian equivalence theorem. An effort will be made to tackle these issues within unified and simple dynamic frameworks.
Instructor(s): S. Salas Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010 and Econ 10200/20200/20210

ECON 13310. Introduction to Macroeconomic Analysis: A Data Driven Approach. 100 Units.
This course offers a comprehensive exploration of neoclassical macroeconomic models, designed for students who have previously studied the principles of macroeconomics. The course is divided into five key modules: (i) economic growth and production, (ii) consumption and savings, (iii) government finances, (iv) money and the

price level, and (v) unemployment. Throughout each module, we extensively utilize relevant data to enhance the understanding of theoretical concepts. By the end of the course, students will not only possess the ability to interpret macroeconomic news and articles but also analyze policies through a model-based framework.
Instructor(s): O. Galvez-Soriano Terms Offered: Autumn Spring
Prerequisite(s): Econ 10200/20200/20210 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 14000. Introduction to Labor Economics. 100 Units.
This course is an introduction to labor economics with an emphasis on applied microeconomic theory and empirical analysis. Topics to be covered include: labor supply and demand, taxes and transfers, minimum wages, immigration, human capital, creativity over the lifecycle and unemployment. For each topic we will describe the basic economic framework used in the analysis, analyze associated cases of study and drawn conclusions about what we have learned. Most of the examples will be taken from U.S. labor data and special attention will be given to randomized trials and experimental methods to infer causality.
Terms Offered: Winter
Prerequisite(s): ECON 10000/20000/20010

ECON 14020. Labor Markets: a Global Perspective. 100 Units.
In this course we will explore standard models that form the core of labor economics including labor supply, labor demand, job search models, wage setting, discrimination, and migration. For each topic we will then examine empirical applications of these models with a focus on middle and low-income countries. We will discuss how these traditional models are useful, or not, in understanding labor market outcomes in these settings and how they can be expanded to better capture relevant features of labor markets outside high-income countries.
Instructor(s): Lane, G Vellekoop, N Terms Offered: Winter
Equivalent Course(s): PPHA 44302, PBPL 25640

ECON 14030. The Workplace and Family Policy. 100 Units.
The topics covered in the course will include: the demographic transition, human capital accumulation, gender wage and employment gaps, discrimination in the workplace, family leave and childcare policies, tax policies including subsidies like the Earned Income Tax Credit (ETIC), and related welfare policies. We will draw on the theory of static and dynamic labor supply, theories of labor demand, and labor market equilibrium to guide its investigation, and use empirical tools to answer research questions. For each topic covered in this course, I will introduce an elementary treatment of the canonical theoretical model and give examples of its empirical application. In studiying empirical applications, we will often draw on analysis from international experience.
Equivalent Course(s): PBPL 25695, GNSE 25695

ECON 14050. Introduction to Labor Economics and the Firms. 100 Units.
This course will focus on the most important topics in labor economics such as the determination of levels of employment and wages, compensating wage differentials, human capital, migration, and discrimination. Moreover, the course will investigate the decision-making process of both workers and firms and their impact on the wage distribution
Instructor(s): Ramos, M. Terms Offered: Spring
Prerequisite(s): Econ 10000 or Econ 20000 or Econ 20010

ECON 14810. Evolution and Economics of Human Behavior. 100 Units.
This course explores how evolutionary biology and behavioral economics explain many different aspects of human behavior. Specific topics include evolutionary theory, natural and sexual selection, game theory, cost-benefit analyses of behavior from an evolutionary and a behavioral economics perspective, aggression, power and dominance, cooperation and competition, biological markets, parental investment, life history and risk-taking, love and mating, physical attractiveness and the market, emotion and motivation, sex and consumer behavior, cognitive biases in decision-making, and personality and psychopathology.
Instructor(s): D. Maestripieri Terms Offered: Autumn
Note(s): CHDV Distribution: Undergraduate subject area: A, Graduate distribution: 1
Equivalent Course(s): CHDV 27950, CHDV 37950, PSYC 37950, PSYC 27950

ECON 15010. Investments: From Economics to Finance. 100 Units.
This course studies finance and investments through the lens of economic equilibrium methods. We look at how the general equilibrium framework in economics gives rise to the factor pricing models in finance, the no-arbitrage framework in economics gives rise to the option pricing models in finance, and the Nash equilibrium framework in economics gives rise to the microstructure trading models in finance. Trillions of dollar worth of financial products ride on these financial models, and we trace the path from the basic models of equilibrium in economic theory to these applied models in finance that have found immense use in practice. The course combines a theoretical framework with applied analysis. Topics covered include: basics of general equilibrium with uncertainty, mean-variance utility, portfolio optimization, capital asset pricing model, no-arbitrage equilibrium, fundamental theorem of asset pricing, binomial option pricing, Black-Scholes-Merton options theory, Bayes Nash equilibrium, Kyle and Glosten-Milgrom models of trading.
Instructor(s): A. Bhattacharya Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/STAT 23400/ECON 11010.

ECON 15020. Trading: From Game Theory to Finance. 100 Units.
This course studies trading in financial markets through the lens of game theory and asymmetric information. Trading models are at the heart of financial markets, and we trace the path from basic models in game theory and equilibrium economics to applied trading models in finance that have found immense use in practice. We look at how the asymmetric information framework gives rise to market microstructure trading, equilibrium tatonnement process gives rise to arbitrage trading, general equilibrium framework gives rise to beta-based trading, model uncertainty gives rise to alpha-based trading, and event uncertainty gives rise to option trading. The course combines a theoretical framework with applied analysis. Topics covered include: information structures, Bayesian probability, Blackwell's theorem, basics of rational expectations equilibrium, Bayes Nash equilibrium, limit order books, bid-ask spread formation, asymmetric information models of microstructure trading, PIN model, capital asset pricing model, beta and index fund trading, alpha and hedge fund trading, speculative trading with options, high-frequency trading, arbitrage and behavioral trading models.
Instructor(s): A. Bhattacharya Terms Offered: Spring
Prerequisite(s): Econ 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 15030. Basics of Corporate, Banking and Investment Finance. 100 Units.
This course introduces the basics of corporate finance, investments, and banking, with an emphasis on real-world applications. The aim is to prepare students for a career in financial economics and allied industries including banking, investment management, and capital markets. We shall discuss capital structure, corporate valuation, financial statement analysis, cost of capital, interest rates, yield curve analysis, monetary policy impact, risk and return analysis, portfolio theory, capital asset pricing model and financial instruments. The course is a rigorous introduction to various facets of financial economics that a practitioner in the field handles, and it serves as a gateway to the more advanced courses on these topics. The course includes Friday lab sessions that will include a case study, discussions with industry alumni, and preparation for upcoming recruiting cycles.
Terms Offered: Summer
Prerequisite(s): Econ 10000/20000/20010 and Econ 10200/20200/20210 and Econ 11010/STAT 22000/STAT 23400/ STAT 24400

ECON 15500. Introduction to Development Economics. 100 Units.
The course explores one of the most pressing global challenges: poverty. Through a microeconomic and empirical lens, students learn to analyze the economic lives of the poor, examining why poverty persists, and which interventions have been effective to sustainably improve the lives of poor people in low- and middle-income countries (LMIC). The course employs economic theory and econometric methods to analyze consumption, health, education, access to credit, entrepreneurship, and migration. The course places the microeconomic issues in the context of the macroeconomic context of economic institutions, e.g., security of property rights, and political institutions, e.g., electoral empowerment. Using both historical perspectives and contemporary studies, students learn about the frontier of knowledge at the frontier of development economics, emphasizing empirical research and data analysis. The course prioritizes close reading of accessible articles from top economics journals and includes data analysis interpretation exercises. Class discussions apply the frontier state of knowledge to real-world cases to prepare students for further study and careers in policy and economic development.
Instructor(s): S. Vasudevan Terms Offered: Winter
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 16000. Elements of Human Capital Theory: The Economic Science of People. 100 Units.
Many believe economics is a discipline mostly concerned with money, finance, taxes, international trade, and industrial policy. This course explores how economics is, above all, about people. It covers a wide range of topics, all seen through the lens of human capital theory to demonstrate its importance in the economy: parental investment in children, nature versus nurture, aging, education, health, marriage, fertility, preference formation, specialization, and economic growth. In addition to discussing economic theory, students will gather and analyze data, consider applicable examples in literature, movies, sports, or popular culture, and write short essays. No prior knowledge of calculus, economic theory, or econometrics is required.
Terms Offered: Summer

ECON 16040. Introduction to Human Capital. 100 Units.
This course introduces the concept of human capital, its accumulation process, its role in family decisions, and its impact on the economy. The insights of several models are explained and discussed, covering a wide range of topics, including parental altruism, education, bequests, health, fertility, support in old age, income inequality, intergenerational transmission of wealth, specialization, division of labor, and economic growth. The theory is complemented with historical evidence from different countries and periods.
Instructor(s): P. Pena Terms Offered: Spring
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 16050. Why aren't humans replacing themselves? What are the consequences? 100 Units.
The human fertility rate has fallen in half in the last 50 years, and is below replacement in more and more countries. These declines imply that the human population on Earth will peak at roughly 12 billion around 2075. Will the human population stabilize or collapse after it peaks? Will human civilization survive? This course will examine this Big Question in depth. We will first review the data demonstrating the decline in total fertility rate in countries around the world, then consider the multitude of explanations that have been proposed for this decline. Next, we will explore the consequences for human well-being and civilization of population

decline. Finally, we will investigate potential solutions to the problem, with an eye to the underlying causes of fertility decline. Students from a wide variety of fields are welcome, including those with knowledge of partial differential equations, data analysis, or programming skills, but no prior experience in demography or related areas. Students will write a final paper that examines a particular cause of fertility decline and critically evaluates it, providing the best evidence for and against it. This course is cross-listed with the McKeon Center in the UChicago College.
Instructor(s): Dorian Abbot, Anup Malani Terms Offered: May be offered 2026-2027
Prerequisite(s): PQ: Third or fourth-year standing.
Equivalent Course(s): BPRO 27450

ECON 16520. Economics and Environmental Policy. 100 Units.
This course combines basic microeconomic theory and tools with contemporary environmental and resources issues and controversies to examine and analyze public policy decisions. Theoretical points include externalities, public goods, common-property resources, valuing resources, benefit/cost analysis, and risk assessment. Topics include pollution, global climate change, energy use and conservation, recycling and waste management, endangered species and biodiversity, nonrenewable resources, congestion, economic growth and the environment, and equity impacts of public policies.
Instructor(s): S. Shaikh Terms Offered: Autumn
Prerequisite(s): ECON 10000 or higher, or PBPL 20000
Note(s): Not offered in Autumn of the 2020-21 academic year.
Equivalent Course(s): CEGU 21800, PBPL 21800

ECON 16550. The Climate and Growth Challenge. 100 Units.
The global energy and climate challenge is perhaps the most important problem society faces. It requires identifying approaches to ensure people have access to the inexpensive and reliable energy critical for human development, without causing disruptive climate change or unduly compromising health and the environment. The course pairs technical and economic analysis to develop an understanding of policy challenges in this area. Lecture topics will include the past, present, and future of energy supply and demand, global climate change, air pollution and its health consequences, selected energy technologies such as solar photovoltaics, nuclear power, unconventional oil and gas, and an analysis of theoretical and practical policy solutions in developed and emerging economies.
Instructor(s): Michael Greenstone Terms Offered: Spring
Prerequisite(s): BPRO 22510: third or fourth-year status. CEGU 22510, CCSG 19000, ECON 16550, PBPL 22510: First-year student by permission of instructor only.
Equivalent Course(s): BPRO 22510, CEGU 22510, PBPL 22510, CCSG 19000

ECON 16560. Consumers, Firms, and the Environment. 100 Units.
This course applies microeconomic analysis to energy markets and environmental problems like climate change. Using theory and data, we examine how consumers and firms make decisions about pollution, energy use, and clean technology adoption. We also study how government policies like taxes, regulations, and subsidies shape these decisions. Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): Brown, M. Terms Offered: Spring
Prerequisite(s): ECON 10000 or ECON 20000 or ECON 20010) and (STAT 22000 or STAT 23400 or STAT 24400 or ECON 11010).

ECON 16700. Introduction to Economics of Education. 100 Units.
This course investigates economic issues related to education. We will first discuss the theory behind the decision to invest in education. We will talk about private and social returns to education as well as signaling value of education. Then, we will investigate which factors (class size, teachers, incentives, peers, beliefs, etc.) matter in determining the success of students. Throughout the course, we will learn how different methods (experiments, difference-in-differences, instrumental variables, and regression discontinuity) are used to answer the economics of education questions.
Instructor(s): F. Ersoy Terms Offered: Winter
Prerequisite(s): ECON 10000/20000/20010 and ECON 11010/STAT 22000/STAT 23400/STAT 24400

ECON 16710. Education and Economic Development. 100 Units.
This course covers policy issues related to education in developing contexts. We will analyze education policies and reforms, develop skills to be a critical consumer of relevant research on each topic, and examine implications of the findings to policy and practice. Topics include discrimination and inclusion in education, understanding factors that influence educational decisions, provision of basic needs in schools, teacher pay and incentives, education in emergency settings, and school choice.
Instructor(s): A. Adukia Terms Offered: Winter
Prerequisite(s): Recommended prerequisite courses: Microeconomics and econometrics. Students in their last years will be given priority.
Equivalent Course(s): PBPL 28350, EDSO 28350

ECON 16950. Conflict: Root Causes, Consequences and Solutions for the Future. 100 Units.
The goals of this course are to introduce you to key concepts in the study of conflict, and to help you develop the analytical skills you need to understand and assess key arguments advanced in this arena. Drawing primarily

on economics and political science, as well as psychology, we will seek to understand: Why do human beings engage in acts of violence? How can armed groups compel atrocities? How do we prevent cycles of violence, and aid countries recovering from war? Specifically: We will examine the role of economic shocks and ethnic divisions on civil war. We will also discern whether similar factors explain the rise of terrorism. In addition, we will study the consequences of conflict on socio-economic development, and examine the role of foreign aid and post-conflict reconciliation in helping countries recover from conflict. The class will examine these questions while focusing on analytical skills needed to understand cutting edge research in this area. Thus a major emphasis of the course is on learning how to think critically about empirical evidence, and learning the methods used in quantitative empirical analysis, such as fixed effects models, differences-in-differences research designs, and instrumental variables estimation. It is ideal for students who want to learn substantively about conflict while developing an understanding of the methodology used to produce key empirical findings.
Instructor(s): Oeindrila Dube Terms Offered: Winter
Note(s): Note: While the course sets out to teach these skills, you do not need previous coursework in statistics.
Equivalent Course(s): PBPL 28750, PLSC 28750

ECON 17100. Introduction to International Trade. 100 Units.
This course covers international economics with an emphasis on international trade. The basic theories of international trade are introduced and used to analyze welfare and distributional effects of international trade, government policies, and technology diffusion. In addition, this course also discusses the main empirical patterns of international trade and international investment.
Instructor(s): Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/19800/20000/20010 and ECON 10200/19900/20200/20210

ECON 17700. Introduction to Health Economics. 100 Units.
This course will introduce students to the economics of health care provision and payment. We will use methods from microeconomics to investigate how different aspects of the health care system function and to assess the implications for different policies designed to improve that functioning. We will use economic tools and techniques from the sub-disciplines of information economics, industrial organization, labor economics, public economics, behavioral economics, and decision theory to think about these questions. The primary goals of the course will be to (i) master different economic techniques in the context of health care markets and (ii) learn about the specific institutional details and policies relevant to those markets.
Instructor(s): Root, A. Terms Offered: Spring
Prerequisite(s): ECON 10000/20000/20010 and ECON 11010/STAT 22000/STAT 23400/STAT 24400

ECON 17720. Evidence in Health Policy. 100 Units.
In this course, we will consider the role of evidence and empirical studies in helping inform us about important health policy topics, such as the consequences of expanding the Medicaid program, the effects of private equity acquisitions of medical facilities, and the burden of medical debt. The course will be divided into two-lecture modules where, in the first, we will read an editorial or descriptive piece that helps introduce a health policy context, and, in the second, we will read a study that confronts the topic using modern empirical methods. In class, we will learn both about health policy and how to read and understand evidence in support or opposition of those policies. Out of class activities will including synthesizing studies to inform a prospective policy proposal and reanalyzing prior studies using actual data and statistical programming. This course was previously named Issues in Health Policy.
Instructor(s): Brot, Z Terms Offered: Winter
Equivalent Course(s): PPHA 38050, PBPL 25510

ECON 18010. Introduction to Managerial Microeconomics. 100 Units.
This course presents several classic microeconomic models applicable in business contexts. The topics covered include self-selection, commitment, product differentiation, matching, and mechanism design, among others. The theoretical insights of each model are analyzed. Real-world applicability is discussed using practical examples. Students are required to write short papers applying the models presented in the course to real-world situations in the context of business.
Instructor(s): P. Pena Terms Offered: Autumn
Prerequisite(s): ECON 10000 or ECON 19800 or ECON 20000 or ECON 20010

ECON 18020. Introduction to Applied Empirical Industrial Organization. 100 Units.
In this course, students will learn how to apply techniques and models developed in industrial organization and law and economics to important questions that arise in litigation and government regulation. We will be guided and informed by pure theory underlying industrial organization and implement it in a world of partial information, incomplete data, and even contradictory data, among other complexities. Students will learn how to develop inferences by applying the models to real world cases and data - ie, extracting the most information possible from partial, imperfect data, frequently with missing values or poorly-measured data points. These fact patterns will not always result in an incontrovertible answer. Thus, students will be expected to identify and express the "best argument for" and "best argument against" the questions posed to them. This means that students will be expected to (i) use theory as a guideline to assess the relevant facts, circumstances, and data, (ii) reach a view, (iii) succinctly express that view in writing and acknowledge and address contrary theory and empirical results. Students will also see actual expert reports and/or white papers that have been prepared in

actual disputes and investigations. Part of the grade will be based on an "expert report" written by the students in small teams.
Terms Offered: TBD
Prerequisite(s): Econ 10000/20000 and Econ 11020/21020
Note(s): Business Economics specialization students should register for Econ 18020.

ECON 18650. Law and Economics of Business Law. 100 Units.
This course will introduce students to the economic analysis of business law. Students will be introduced to basic concepts of private law, including contracts, property, and remedies. They will then learn the basic tools of law and economics. With those skills they will explore the law of for-profit businesses, including corporate governance, mergers and acquisitions, and corporate bankruptcy. Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): Casey, A. Terms Offered: Spring
Prerequisite(s): Econ 10000 or Econ 20000 or Econ 20010

ECON 19000. Economics for Everyone: Micro. 100 Units.
The field of economics has generated a powerful set of insights which have fundamentally shaped the modern world. Because modern economics puts such a heavy stress on mathematical rigor, the most interesting economic ideas often get pushed to the background. In this course, we will explore these big economic ideas, without the math. Our goal is to make the beauty and power of economic thinking available to everyone. We will discuss what it means to think like an economist, how you can use economic thinking to make the world a better place (or to take advantage of your friends and enemies, if you prefer), and also how sometimes thinking like an economist can get you into trouble.
Instructor(s): J. List, S. Levitt Terms Offered: TBD
Note(s): This course will now count as an ECON elective for the business economics specialization.

ECON 19100. Economics for Everyone: Macro. 100 Units.
This course explores the big ideas in macroeconomics in a way that is enjoyable and accessible, with minimal reliance on mathematics. The goal is to provide an introduction to macroeconomic issues for people who have never before studied macroeconomics (and who might never study it again), so that they can understand and contribute to ongoing discussions in the news and on social media. We will demystify some of the major macroeconomic questions of our times: Why is there unemployment? Why are some countries poor? What's the big deal about government debt? How high should we set taxes? What gives money and stocks their value? What does the Fed do? And why did all those economists win Nobel Prizes? We will show the fun, interesting, and strange sides of macroeconomics.
Instructor(s): G. Kaplan and R. Shimer Terms Offered: Winter
Note(s): Beginning in 2025, ECON 19100 may count as an ECON elective for the business economics specialization.

ECON 19200. Introduction to Issues and Methods in Microeconomics. 100 Units.
Microeconomics is the study of how agents make optimal choices when facing constraints. The course will start by developing the "Economic Approach" as the basic tool for analysis in economics. We will continue with a model of causal inference, and link it with concepts students have learned in the econometrics course. Then, we introduce the use of experiments as an alternative methodology for the researchers to gather their own data. Finally, we cover some major topics in behavioral economics.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 10000/20000/20010.
Note(s): Study Abroad

ECON 19300. Introduction to Issues and Methods in Macroeconomics. 100 Units.
We will develop basic tools and methods in economics and study issues in macroeconomics and international trade and finance. The topics we cover include both contemporary and classical issues such as tax incidence and distortions, optimal taxation, inflation, monetary policy, patterns and benefits of trade, and exchange rate determination. The objective of the course is to train students with analytical tools in macroeconomics so that they can understand, analyze, and evaluate various policies and policy proposals. To make the subject matters relevant and practical, students are strongly encouraged to read the Wall Street Journal and the Economist regularly to keep up with current events and controversies.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 10200/20200/20210
Note(s): Study Abroad

ECON 19500. Practice of Risk Management and Investing. 100 Units.
Principles and practices for financial decision-making under uncertainty. This course provides a foundational understanding of investment strategies and risk management. It is designed to give a perspective on the complexities surrounding financial decision making amidst uncertain market conditions. Students will learn about different types of risks that impact investments, and best practices for risk management under a range of real market conditions, always under the foundations of a robust theoretical framework. We will draw insights from real market events that have significantly influenced the investment landscape, such as the financial crisis of 2008-2009, the pandemic of 2020 and other ruptures that impacted markets in the past. Once familiarized with concepts in investing such as portfolio response to risks, yield curves, credit risk, tail and normal risks,

and portfolio diversification, the class will be divided in teams to "play" a portfolio challenge game. Teams will manage a portfolio of bonds and navigate it as market conditions are perceived to change, protect the portfolio against market downturns and produce the best possible return at the end of the market cycle. The market conditions in this game are real, and we will be able to, together, appreciate the difficulties in forecasting the future of markets and manage investment risks under real uncertainties.
Instructor(s): Staff Terms Offered: Spring
Prerequisite(s): (ECON 10000/20000/20010) and (STAT 22000/STAT 23400/STAT 24400/STAT 24410/ECON 11010) and (ECON 11020 or ECON 21020 or ECON 15010 or ECON 15020)

ECON 20000-20100-20200-20300. The Elements of Economic Analysis I-II-III-IV.

ECON 20000. The Elements of Economic Analysis I. 100 Units.
This course develops the economic theory of consumer choice. This theory characterizes optimal choices for consumers given their incomes and preferences, as well as the relative prices of different goods. This course develops tools for analyzing how these optimal choices change when relative prices and consumer incomes change. Finally, this course presents several measures of consumer welfare. Students learn how to evaluate the impact of taxes and subsidies using these measures. Completion of ECON 10000 is strongly recommended of students without a prior microeconomics course.
Terms Offered: Autumn Spring
Prerequisite(s): MATH 13300 (with prior completion of or at least concurrent with MATH 15250), MATH 15200, MATH 16300, MATH 15250, MATH 15910, MATH 18300, MATH 18400, MATH 20300, MATH 20310, or MATH 20700. First year students may enroll in Econ 20000 concurrently with Math 16300/16310 if they have received an A/A- in both Math 16100/16110 and Math 16200/16210.
Note(s): Students who matriculated prior to 2022-2023 and have completed MATH 15100-15200-15300 may replace the MATH 19520 requirement with MATH 15250. They may take MATH 15250 prior to or concurrently with ECON 20000/20010.

ECON 20100. The Elements of Economic Analysis II. 100 Units.
This course is a continuation of ECON 20000. The first part of this course discusses markets with one or a few suppliers. The second part focuses on demand and supply for factors of production and the distribution of income in the economy. This course also includes some elementary general equilibrium theory and welfare economics.
Instructor(s): Staff Terms Offered: Autumn Winter
Prerequisite(s): ECON 20000 or 20010

ECON 20200. The Elements of Economic Analysis III. 100 Units.
As an introduction to macroeconomic theory and policy, this course covers the determination of aggregate demand (i.e., consumption, investment, the demand for money); aggregate supply; and the interaction between aggregate demand and supply. We also discuss economic growth, business cycle, inflation and money. Completion of ECON 19900 is strongly recommended of students without a prior macroeconomics course.
Instructor(s): Staff Terms Offered: Spring Winter
Prerequisite(s): ECON 20100 or 20110

ECON 20300. Elements of Economic Analysis IV. 100 Units.
This is a course in money and banking, monetary theories, the determinants of the supply and demand for money, the operation of the banking system, monetary policies, financial markets, and portfolio choice.
Instructor(s): Staff
Prerequisite(s): ECON 20200 or 20210

ECON 20010-20110-20210. The Elements of Economic Analysis: Honors I-II-III.
The Elements of Economic Analysis: Honors I-II-III

ECON 20010. The Elements of Economic Analysis I Honors. 100 Units.
The scope of the honors section is the same as the standard section, but it covers material at greater depth and using more sophisticated mathematical methods. This course develops the economic theory of consumer choice. This theory characterizes optimal choices for consumers given their incomes and preferences, as well as the relative prices of different goods. This course develops tools for analyzing how these optimal choices change when relative prices and consumer incomes change. Finally, this course presents several measures of consumer welfare. Students learn how to evaluate the impact of taxes and subsidies using these measures. Completion of ECON 10000 (or ECON 19800) is strongly recommended of students without a prior microeconomics course.
Instructor(s): V. Lima Terms Offered: Autumn
Prerequisite(s): MATH 13300 (with prior completion of or at least concurrent with MATH 15250), MATH 15200, MATH 16300, MATH 15250, MATH 15910, MATH 18300, MATH 18400, MATH 20300, MATH 20310, or MATH 20700. First year students may enroll in Econ 20000 concurrently with Math 16300/16310 if they have received an A/A- in both Math 16100/16110 and Math 16200/16210.
Note(s): Students who matriculated prior to 2022-2023 and have completed MATH 15100-15200-15300 may replace the MATH 19520 requirement with MATH 15250. They may take MATH 15250 prior to or concurrently with ECON 20000/20010.

ECON 20110. The Elements of Economic Analysis II Honors. 100 Units.
The scope of the honors section is the same as the standard section, but it covers material at greater depth and using more sophisticated mathematical methods. This course is a continuation of ECON 20000/20010. The first part of this course discusses markets with one or a few suppliers. The second part focuses on demand and supply for factors of production and the distribution of income in the economy. This course also includes some elementary general equilibrium theory of welfare economics.
Instructor(s): R. Fang Terms Offered: Winter
Prerequisite(s): ECON 20000 or 20010

ECON 20210. The Elements of Economic Analysis III Honors. 100 Units.
The scope of the honors section is the same as the standard section, but it covers material at greater depth and using more sophisticated mathematical methods. As an introduction to macroeconomic theory and policy, this course covers the determination of aggregate demand (i.e., consumption, investment, the demand for money); aggregate supply; and the interaction between aggregate demand and supply. We also discuss economic growth, business cycle, inflation and money. Completion of ECON 10200 (or ECON 19900) is strongly recommended of students without a prior macroeconomics course.
Instructor(s): K. Yoshida Terms Offered: Spring
Prerequisite(s): ECON 20100 or 20110

ECON 20520. Formal Models of Political Economics. 100 Units.
Why do the Republicans and the Democrats almost always ended up choosing moderates as their party nominees in presidential races? How do "checks and balances" such as a legislative committee's power to set the agenda or a president's power to veto a bill affect policy outcomes? What leads to coalition building in a legislature and how does it affect the result of legislative bargaining? When can a legislature optimally delegate its power to a bureaucratic agency who has its own interests and agenda? To answer questions like these, we study formal models of political economics. Such models examine explicitly the incentives of participants in political processes and generate predictions of their behavior based on such incentives and any confounding strategic considerations. Our approach is largely game theoretical. Familiarity with fundamental game theoretical ideas like the strategic and extensive games, the Nash Equilibrium, and the Subgame Perfect Equilibrium is essential and assumed.
Instructor(s): R. Fang Terms Offered: Autumn
Prerequisite(s): ECON 10700 or ECON 20100 or ECON 20110 or ECON 20700
Note(s): Students may count either ECON 20510 or ECON 20520, but not both, toward the 42 credits required for graduation.

ECON 20700. Game Theory and Economic Applications. 100 Units.
This course introduces the basic ideas and applications of game theory. Topics include models of games in extensive and strategic form, equilibria with randomization, signaling and beliefs, reputation in repeated games, bargaining games, investment hold-up problems, and mediation and incentive constraints.
Instructor(s): R. Fang Terms Offered: Spring
Prerequisite(s): ECON 20100/20110
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770/ECMA 30770] toward the 42 credits required for graduation.

ECON 20770. Decision and Strategy. 100 Units.
This course provides a formal introduction to game theory with applications in economics. We will study models of how individuals make decisions, and how those decisions are shaped by strategic concerns and uncertainty about the world. The topics will include the theory of individual choice, games of complete and incomplete information, and equilibrium concepts such as Nash equilibrium. The applications will include oligopoly, auctions, and bargaining. The course is appropriate for advanced undergraduates who are interested in a rigorous mathematical approach to understanding human behavior.
Instructor(s): B. Brooks Terms Offered: TBD
Prerequisite(s): Prerequsites for Undergraduates: ECON 20100/ECON 20110 and MATH 20300/MATH 20310/MATH 20700, or consent of instructor
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770/ECMA 30770] toward the 42 credits required for graduation.
Equivalent Course(s): ECMA 30770

ECON 20780. Decision and Strategy II. 100 Units.
We continue the formal introduction to decision theory and game theory begun in ECMA 30780, with a specific focus on models of incomplete information. Topics covered include subjective expected utility, Bayesian games, contract theory, and mechanism design. Among the applications we will consider are auctions, collusion, entry deterrence, and strategic communication. The course is appropriate for advanced undergraduates who are interested in a rigorous mathematical approach to decision making in strategic situations.
Instructor(s): B. Brooks Terms Offered: TBD
Prerequisite(s): ECON 20770/ECMA 30770 or consent of instructor
Equivalent Course(s): ECMA 30780

ECON 21020. Econometrics. 100 Units.
Required of students who are majoring in economics; those students are encouraged to meet this requirement by the end of their third year. This course covers the single and multiple linear regression model, the associated distribution theory, and testing procedures; corrections for heteroskedasticity, autocorrelation, and simultaneous equations; and other extensions as time permits. Students also apply the techniques to a variety of data sets using PCs.
Instructor(s): Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): [Econ 20100 or Econ 20110] and [Math 19620 or Math 18500 or Math 20000 or Math 20250 or Math 20700 or Stat 24300] and [Stat 23400 or Stat 24400 or Stat 24410]

ECON 21030. Econometrics - Honors. 100 Units.
The topics are essentially the same as those covered in ECON 21020, but this foundations course in econometrics gives a more systematic introduction to the application of statistical theory to economic applications. This course is intended for students who are planning to study economics at the graduate level.
Instructor(s): J. Hardwick Terms Offered: Spring Winter
Prerequisite(s): ECON 20100/20110, and STAT 24400/24410/24500, and MATH 19620/20250/STAT 24300; or consent of instructor

ECON 21031. Econometrics II-Honors. 100 Units.
This course is a continuation of ECON 21030. The topics covered include additional applications of linear regression to descriptive and causal inference. Other topics may include nonlinear models, panel data, quantile regression, time series, the bootstrap, and nonparametric regression. This course is intended for students who are planning to study economics at the graduate level.
Instructor(s): A. Torgovitsky Terms Offered: Spring
Prerequisite(s): ECON 21020/21030

ECON 21110. Applied Microeconometrics. 100 Units.
This course will cover a broad set of applications in labor economics, public economics, industrial organization, economics of education, environmental economics, and development economics. There will be a strong focus on how economic theory, institutional details, and experiments can be used to draw causal inferences on economic relationships. There will be emphasis on applying a number of commonly used microeconometric methods to economic data; including the linear regression model, fixed and random effects models, instrumental variables, and discrete choice models. When interpreting the empirical results, we will also discuss the importance of omitted variables bias and measurement error.
Instructor(s): J. Joensen Terms Offered: Winter
Prerequisite(s): ECON 21020 or ECON 21030

ECON 21160. Topics in Causal Inference. 100 Units.
This course covers selected topics on causal inference and econometrics. Special attention will be given to the use of economic models in causal inference. This course is intended for students who are planning to study economics at the graduate level.
Instructor(s): M. Mogstad, A. Torgovitsky
Prerequisite(s): ECON 21030 (or ECON 21020 with instructor consent)

ECON 21200. Time Series Econometrics. 100 Units.
This course focuses on theory, and covers a broad range of topics, both mathematical and statistical, on stationary time series models in time and frequency domains. The models include ARMA, VAR, ARCH/GARCH and their variants. It also covers nonstationary time series models with unit roots and cointegration, and the theories and methodologies to estimate and test them statistically.
Instructor(s): Staff Terms Offered: TBD
Prerequisite(s): ECON 20200/20210 and ECON 21020/21030

ECON 21315. Econometric Applications I. 100 Units.
Course one of a two-quarter sequence designed to guide students through the steps of writing a research paper that applies econometric methods to study an economic question of interest. In the course, we will review and supplement our understanding of econometric methods that are frequently used in applied work, along with readings and in-class discussions of research papers to illustrate how applied research is conducted and presented. Along with homework assignments and required readings, during the first quarter, students will identify a topic of interest, locate data sources, review relevant literature, and make a presentation of their research proposal.
Instructor(s): A. Hortacsu Terms Offered: Winter
Prerequisite(s): ECON 21030 or consent of instructor
Note(s): Note: Students who have taken ECON 21320 or ECMA 31320 may not enroll in ECON 21315. ECON 21315 may count as a data science course for the economics data science specialization.

ECON 21316. Econometric Applications II. 100 Units.
This course is a continuation of ECON 21315. Students will refine and execute their proposal (from ECON 21315), resulting in a final presentation and a final paper that will undergo peer review.
Instructor(s): A. Hortacsu Terms Offered: Spring
Prerequisite(s): ECON 21315 or consent of instructor (if they have taken ECMA 31320)

Equivalent Course(s): ECMA 31316

ECON 21410. Computational Methods in Economics. 100 Units.
This course introduces the empirical and computational techniques necessary for numerical estimation and simulation in economics. Through examples in economics, the course covers topics such as optimization, function approximation, and monte carlo techniques. Emphasis will be placed on developing effective programming and research practices. The course is structured through a series of applications in such topics as segregation, occupational choice, and repeated games. The course will be taught in R and STATA. Though helpful, no previous experience with R or STATA is required.
Instructor(s): Staff Terms Offered: TBD
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 21730. Applied Behavioral Economics. 100 Units.
This class covers recent work in behavioral economics. Topics include discrimination, social pressure, social norms, identity and gender. Applications will cover a wide range of fields, including labor economics, finance, and political economy.
Instructor(s): L. Bursztyn
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 21740. Behavioral Economics and Experiments. 100 Units.
This is a hands-on course in behavioral economics. Basic concepts of preferences, traits, and behavioral biases are reviewed that link economics and psychology. Methods for eliciting traits and preferences will be taught and implemented in actual lab experiments. Grade will be determined by reports and quality of lab work.
Instructor(s): J. Heckman Terms Offered: TBD
Prerequisite(s): ECON 10000/19800/20000/20010 AND STAT 22000/23400/24300/24400/24410/ECON 21010 (Lab students require one economics course.)

ECON 21800. Experimental Economics. 100 Units.
This course provides the necessary tools to be an avid consumer of the experimental literature and instructs students on how to become a producer of that literature. Topics include a summary of recent experimental findings and details on how to gather and analyze data using experimental methods.
Instructor(s): J. List
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030; ECON 10000/20000 and ECON 11020 for declared business economics students. No first-year students.
Note(s): Students may count either ECON 11700 or ECON 21800, but not both, toward the 42 credits required for graduation.

ECON 22030. The Chinese Economy. 100 Units.
This course provides an overview of the Chinese economy, with two main focuses. First, we will review the significant reforms that happened in China in the past four decades, which fundamentally reshaped the modern China as we see today. Second, we will discuss some of China's key political and economic institutions, and their implications on China and the rest of the world. Throughout the course, special emphasis will be given to the role of the state in China's growth experience, at both the central- and local-levels.
Instructor(s): Wang, S Terms Offered: Spring
Equivalent Course(s): PBPL 25585, PPHA 35585

ECON 23000. Money and Banking. 100 Units.
This course covers economic theories and topical issues in money and banking. We discuss such "traditional" topics as the quantity theory, the Phillips curve, and the money creation process. We also investigate models of bank runs and financial crises, the tradeoff between rules and discretion, and the New Macroeconomic Synthesis of New Classical. Other topics include New Keynesian approaches to modeling money and monetary policy, practical and institutional issues in European and U.S. monetary policy, and the 2008 financial crisis.
Instructor(s): H. Uhlig Terms Offered: Autumn
Prerequisite(s): ECON 20200 (or ECON 20210); ECON 21020 and ECON 23950 are strongly recommended.

ECON 23050. Artificial Intelligence, Innovation, and Growth. 100 Units.
Social and cultural innovation, alongside economic growth, are among the most compelling, critical and challenging phenomena in modern social science. Innovation has always been associated with unleashing transformative growth in art, science, and the economy, and in this class we explore these issues in the context of the contemporary emergence of Artificial Intelligence (AI). AI represents a novel source of innovation in economy and society, but also a powerful tool for understanding, modeling, and steering innovation in new ways. The primary purpose of this course is to enable students to understand innovation and growth in the age of AI, and with tools from AI alongside theoretical frameworks and methods from economics, sociology, evolution, and complex systems necessary for study them. The course strives to provide students with a background in dynamic analysis, data analysis, and modern AI requisite for studying innovation in the modern age. We will also consider a number of compelling theoretical and empirical challenges, ranging from the paradox of institutionalizing innovation to inequalities that emerging AI capacities could create or remove to advances it could unleash in science and technology to the spread of misinformation to consequences of AI tools and "agents" in all domains of modern life to existential risks associated with AI. We will cover theories and models at an abstract and advanced level.

Instructor(s): Akcigit, U. and Evans, J. Terms Offered: Winter
Prerequisite(s): [MATH 13200 or MATH 15200 or MATH 16200 or MATH 15910 or MATH 20250 or MATH 20300] and [ECON 11010 or STAT 22000 or STAT 23400 or STAT 24400 or SOCI 20004 or SOCI 20602 or SOCI 20596]
Equivalent Course(s): SOCI 30620, ECMA 33050, DATA 20620, MACS 33050, MACS 23050, SOCI 20620

ECON 23200. Topics in Macroeconomics. 100 Units.
This course focuses on the use of dynamic general equilibrium models to study questions in macroeconomics. Topics include long-run growth and dynamic fiscal policy (Ricardian equivalence, tax smoothing, capital taxation), labor market search, industry investment, and asset pricing. On the technical side, we cover basic optimal control (Hamiltonians) and dynamic programming (Bellman equations).
Instructor(s): N. Stokey
Prerequisite(s): ECON 20200 (or ECON 20210) and MATH 20300 (or MATH 20310 or MATH 20700)

ECON 23410. Economic Growth. 100 Units.
The process of economic growth and the sources of differences in economic performance across nations are some of the most interesting, important and challenging areas in modern social science. You cannot travel or read the news without wondering why differences in standards of living among countries are so large. The primary purpose of this course is to introduce undergraduate students to these major issues and to the theoretical tools necessary for studying them. The course therefore strives to provide students with a solid background in dynamic economic analysis, as well as empirical examples and data analysis. We will cover models at an abstract and advanced level. You must have the degree of mathematical maturity associated with the concepts of functions, derivatives, integrals, Taylor series, optimization, ordinary differential equations. Some basic knowledge on regression analysis is also required.
Instructor(s): U. Akcigit Terms Offered: Winter
Prerequisite(s): ECON 20200 (or ECON 20210) and ECON 21020 (or ECON 21030)

ECON 23950. Economic Policy Analysis. 100 Units.
Building on the tools and methods that are developed in the core courses, this course analyzes fiscal and monetary policy and other topical issues. We use both theoretical and empirical approaches to understand the real-world problems.
Instructor(s): Staff Terms Offered: Autumn Spring
Prerequisite(s): ECON 20200/20210; ECON 21020 or 21030 strongly recommended.
Note(s): This course does not apply toward the economics major elective requirement. Students may not receive credit for both Econ 13000 and Econ 23950 toward the 42 degree credits.

ECON 24000. Labor Economics. 100 Units.
This course is an introduction to labor economics with an emphasis on applied microeconomic theory and empirical analysis. Topics to be covered include: labor supply and demand, taxes and transfers, minimum wages, immigration, human capital, creativity over the lifecycle and unemployment. For each topic we will describe the basic economic framework used in the analysis, analyze associated cases of study and drawn conclusions about what we have learned. Most of the examples will be taken from U.S. labor data and special attention will be given to randomized trials and experimental methods to infer causality.
Instructor(s): Staff Terms Offered: Summer
Prerequisite(s): ECON 10000/20000/20010

ECON 24050. Labor Economics and Public Policy. 100 Units.
Why are people paid what they're paid? We will consider this question using the tools of modern labor economics. Specifically, this course will cover theoretical models and empirical evidence on wage and employment determination. Special emphasis will be placed on understanding the effects of government policies on wages and employment. Topics to be covered include: labor supply and demand, taxes and transfers, minimum wages, immigration, human capital and education, discrimination, inequality, labor unions, and unemployment.
Instructor(s): Walters, C. Terms Offered: Spring
Prerequisite(s): (Econ 20100 or Econ 20110) and (Stat 23400 or Stat 24400 or Stat 24410)

ECON 24450. Inequality and the Social Safety Net: Theory, Empirics, and Policies. 100 Units.
This course will introduce students to key economic and conceptual issues surrounding inequality and the social safety net. We will study the theoretical underpinnings and empirical analysis of the social safety net, focusing on the effects of social insurance and public assistance programs on individual and societal outcomes. After studying models of the insurance-incentive tradeoff, we will apply these models and econometric strategies to the empirical analysis of social safety net programs. We will study how social safety net programs interact with labor markets, specifically human capital investment and work decisions, and how they affect long-term outcomes such as income, health, well-being, and inequality. Students will learn how to analyze the tradeoffs involved in social safety net programs and will learn the current state of evidence on these programs.
Instructor(s): M. Deshpande
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 25000. Introduction To Finance. 100 Units.
This course develops the tools to quantify the risk and return of financial instruments. These are applied to standard financial problems faced by firms and investors. Topics include arbitrage pricing, the capital asset pricing model, and the theory of efficient markets and option pricing.
Instructor(s): Staff
Prerequisite(s): ECON 20200/20210 and ECON 21020/21030

ECON 25100. Financial Economics; Speculative Markets. 100 Units.
This course focuses on the description, pricing, and hedging of basic derivative claims on financial assets. We study the characteristics, uses, and payoffs of a variety of contracts where the underlying claims include commodities, foreign currencies, bonds, stocks, or stock indices. We examine contracts such as options, swaps, and futures contracts. We use a unified approach (the technique of portfolio replication) to study pricing of these claims. Students also gain an understanding of strategies for hedging of the risks inherent in holding these derivative claims.
Instructor(s): F. Alvarez Terms Offered: Autumn
Prerequisite(s): ECON 20100/20110 and STAT 23400/24400/24410/ECON 21010

ECON 25120. Options and Volatility Products. 100 Units.
This class covers the pricing and hedging of different type of financial options, as well as of volatility products. The class will develop the analytical tools necessary to understand the basic properties of prices and hedging portfolios, and to write computer code for the valuation and hedging of a very large class of derivatives. The first part of the course covers the valuation of European and American options on Stocks, Commodities, Futures. The second step is to extends it to arbitrary derivative contracts. We will start with the binomial model, and then we will introduces its continuous time limit, as in Black-Scholes. We will proceed to study the valuation of an arbitrary general derivative where the underlying follows a continuous time process. We will further extend it to the case where the derivative depends on several stochastic process, which is required for some cases such as interest rate products, exotic options, and most importantly stochastic volatility. The last part of the class develops the theory of volatility products, with emphasis on variance and volatility swaps, the role of VIX, and derivatives written on VIX over them.
Instructor(s): F. Alvarez Terms Offered: Spring
Prerequisite(s): ECON 10000/20000/20010.
Note(s): While students don't need to take any other finance class as prerequisite, Introduction to Finance, and especially Speculative Markets are very helpful as background. Students are not required to take advanced calculus or partial differential equations, but any knowledge in those areas will help them to take the material beyond the parts covered in class. Finally, I will start with basic codes in excel, and move to the codes in Matlab, but only a minimum of familiarity with writing computer codes is necessary.

ECON 25520. Development Economics and Data Analysis. 100 Units.
Why do some countries grow faster than others? Why do farmers not adopt new technologies that generate higher yields? What is the most effective way to improve health, education and women's empowerment in middle and low income countries? We will examine these questions by applying the tools of economics to the best available data. In addition to mastering the economic literature on development economics, students will learn applied econometric techniques and how to apply them in practice. They will learn how to critically evaluate data analysis and spot potential biases: is the outcome variable likely to be subject to social desirability bias? is there potential selection bias or attrition bias? What techniques are best adapted to addressing these potential biases in the data? In the final part of the course we will cover the role of the International Financial Institutions (the IMF and World Bank) in international development. The course is designed for undergraduates with a strong interest in economics and data and previous experience using statistical software (such as R or Stata).
Instructor(s): R. Glennerster Terms Offered: TBD
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 25530. Behavioral Development Economics (Undergraduate) 100 Units.
This course will focus on the intersection of two rapidly growing and recently Nobel Prize-winning fields in economics - development, and behavioral economics. Behavioral development economics brings insights and tools from psychology and behavioral economics to the study of developing economies and poverty more generally. The class is aimed at students interested in either (or both) of the fields. A decent part of lectures will be focused on introducing and describing tools of behavioral economics, before moving to applications in low- and middle-income countries.
Instructor(s): A. Karing Terms Offered: TBD
Prerequisite(s): Econ 20100/20110 and Econ 21020/21030

ECON 25540. Poverty and Public Policy. 100 Units.
This course covers the extent and nature of poverty, mainly in the United States and other rich countries. We begin with the measurement of poverty, deprivation and homelessness. We then discuss causes of these problems, rationales for government interventions, and the effectiveness of various public policies. The course will focus on the empirical evidence on each topic, but begin with the theoretical foundation in each area.
Instructor(s): Meyer, Bruce Terms Offered: Winter
Equivalent Course(s): PBPL 23215

ECON 26010. Public Finance. 100 Units.
This course addresses the measurement, explanation, and consequences of government activity including tax systems, expenditure programs, and regulatory arrangements. Topics include cross-country comparisons of government behavior, market analyses of public policy, the incidence of government activity, and effects of economic activity on politics and public policy.
Instructor(s): M. Golosov Terms Offered: TBD
Prerequisite(s): ECON 20200/20210 and ECON 21020 (or ECON 21030)
Note(s): ECON 26010 or 26020 may be used as an economics elective, but only one may be used toward degree requirements.

ECON 26030. The Economics of Socialism. 100 Units.
The course examines the economic theories of socialism ranging from Karl Marx's to market socialism, as well as theories of market power, collective action, and price regulation. These theories are applied to the measurement of socialism, income distribution, surplus value, and the degree of exploitation of labor. These metrics are used to compare various mixed economies including the Nordic model and various sectors in the United States. We consider how the economics of socialism might evolve as the health sector grows in the near future and artificial intelligence transforms the workplace in the long run.
Instructor(s): C. Mulligan
Prerequisite(s): Econ 20100/20110

ECON 26040. Human Capital and the Economy. 100 Units.
This course introduces the concept of human capital, its accumulation process, its role in family decisions, and its impact on the economy. Several models are presented and discussed, covering a wide range of topics, including parental altruism, education, bequests, health, fertility, support in old age, income inequality, intergenerational transmission of wealth, specialization, division of labor, and economic growth. The theory is complemented with historical evidence from different countries and periods.
Instructor(s): P. Pena Terms Offered: Spring
Prerequisite(s): Econ 20200/20210

ECON 26610. The Economics of Cities and Regions. 100 Units.
This course studies business and individual location decisions and how they determine the main economic forces that lead to the existence and performance of cities and regional agglomerations. The course starts by developing a simple theory of cities and its implications for city size, firm productivity, and housing prices. It then studies evidence of the impact of cities on firm and worker productivity, urban amenities, and congestion. We will discuss the problems in measuring these forces, the methodologies to do so, as well as the implications of this measurement for businesses, individuals, and urban policy. We will also study the internal structure of cities, and how to evaluate the effect of new infrastructure or policy on land and housing values as well as on overall welfare. Finally, the course will analyze the role cities and regions play in aggregate economic development.
Instructor(s): Rossi-Hansberg, E. Terms Offered: TBD
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 26740. Climate Crossroads: Policy, Diplomacy, and the Global Future. 100 Units.
The world's atmosphere and oceans are rapidly warming-the result of human economic progress fueled by fossil fuels and other greenhouse gas emissions. A 2018 analysis by the Intergovernmental Panel on Climate Change concluded that stabilizing the atmosphere requires reaching "net zero" emissions, where as much greenhouse gas is removed from the atmosphere as is emitted. Achieving this demands a transformation of the global economy on a scale without historic precedent. This course begins by describing the nature and complexity of the climate policy challenge. It then explores the policy levers available to governments at both national and international levels to address it. The course considers perspectives from wealthy, advanced economies-historically the largest source of emissions-as well as emerging economies with significant development needs and rising emissions. It reviews the international framework for cooperation and negotiation on climate change through the United Nations Framework Convention on Climate Change. Finally, students will examine the challenges democratic societies face in maintaining public consensus on climate action, focusing on shifting U.S. policy frameworks. The course will be taught by three experienced practitioners: the White House lead on climate policy in the Obama and Biden Administrations, the former Foreign Minister of Pakistan, and the U.S.'s longtime lead negotiator at the UNFCCC and other international treaty negotiations.
Instructor(s): John Podesta, former White House Chief of Staff and Senior Advisor for International Climate Policy; Hina Rabbani Khar, former Foreign Minister of Pakistan; Sue Biniaz, Principal Deputy Special Envoy for Climate at the U.S. State Department; and Conor Carney Terms Offered: Autumn
Note(s): This course can count towards the Politics, Economics, and Society specialization in for the Climate and Sustainable Growth major.
Equivalent Course(s): PBPL 21025, GLST 21025, CCSG 21025, CEGU 21025

ECON 26920. Behavioral Economics and Policy. 100 Units.
The standard theory of rational choice exhibits explanatory power in a vast range of circumstances, including such disparate decision making environments as whether to commit a crime, have children, or seek to emigrate. Nonetheless, shortfalls from full rationality seem not to be uncommon, and are themselves, to some extent, systematic. Behavioral economics documents and tries to account for these departures from full rationality. This course looks at areas in which some modification of the traditional rational choice apparatus might most be

warranted; these include decisions that unfold over time, involve low probability events, or implicate willpower. To what extent should public policy respond to shortfalls from rationality or concern itself with promoting happiness?
Instructor(s): J. Leitzel Terms Offered: Autumn
Equivalent Course(s): PBPL 28805

ECON 27000. International Economics. 100 Units.
This course covers international economics with an emphasis on international trade. The basic theories of international trade are introduced and used to analyze welfare and distributional effects of international trade, government policies, and technology diffusion. In addition, this course also discusses the main empirical patterns of international trade and international investment.
Instructor(s): J. Castro-Vincenzi Terms Offered: Spring
Prerequisite(s): ECON 20100/20110
Equivalent Course(s): PBPL 27000

ECON 27300. Regulation of Vice. 100 Units.
This course discusses government policy regarding traditional vices (i.e., drinking, smoking, gambling, illicit sex, recreational drug use). Among policies considered are prohibition, taxation, treatment, decriminalization, and legalization. The intellectual framework employed to evaluate various policies is primarily economic, though other disciplines are drawn upon. This course is offered in alternate years.
Instructor(s): J. Leitzel Terms Offered: Winter
Prerequisite(s): ECON 20000 or PBPL 20000
Equivalent Course(s): PBPL 27300

ECON 27700. Health Economics and Public Policy. 100 Units.
This course analyzes the economics of health and medical care in the United States with particular attention to the role of government. The first part of the course examines the demand for health and medical and the structure and the consequences of public and private insurance. The second part of the course examines the supply of medical care, including professional training, specialization and compensation, hospital competition, and finance and the determinants and consequences of technological change in medicine. The course concludes with an examination of recent proposals and initiatives for health care reform. Must have completed PPHA 32300 Principles of Microeconomics and Public Policy I or equivalent to enroll.
Instructor(s): Meltzer, D Terms Offered: Spring
Equivalent Course(s): PPHA 38300, CCTS 38300, PBPL 28300

ECON 28000. Industrial Organization. 100 Units.
This course extends the analysis from ECON 20100, with a focus on understanding the way firms make decisions and the effects of those decisions on market outcomes and welfare. The course examines the structure and behavior of firms within industries. Topics include oligopolistic behavior, the problems of regulating highly concentrated industries, and the implementation of U.S. antitrust policy.
Terms Offered: Spring
Prerequisite(s): ECON 20100/20110

ECON 28010. Applied Empirical Industrial Organization. 100 Units.
In this course, students will learn how to apply techniques and models developed in industrial organization and law and economics to important questions that arise in litigation and government regulation. We will be guided and informed by pure theory underlying industrial organization and implement it in a world of partial information, incomplete data, and even contradictory data, among other complexities. Students will learn how to develop inferences by applying the models to real world cases and data - ie, extracting the most information possible from partial, imperfect data, frequently with missing values or poorly-measured data points. These fact patterns will not always result in an incontrovertible answer. Thus, students will be expected to identify and express the "best argument for" and "best argument against" the questions posed to them. This means that students will be expected to (i) use theory as a guideline to assess the relevant facts, circumstances, and data, (ii) reach a view, (iii) succinctly express that view in writing and acknowledge and address contrary theory and empirical results. Students will also see actual expert reports and/or white papers that have been prepared in actual disputes and investigations. Part of the grade will be based on an "expert report" written by the students in small teams.
Prerequisite(s): Econ 20100/20110 and Econ 21020/21030
Note(s): Standard Track Economics majors should register for Econ 28010

ECON 28030. Markets and Regulation. 100 Units.
This is an applied industrial organization course that examines economically regulated market structures. We will analyze: a) types of market structures that particularly generate economic regulation; b) common methods used by regulatory agencies given a particular market structure; and c) models of the supply of and the demand for regulation of markets, with emphasis on maximizing behavior on the part of both suppliers (regulators) and demanders (firms, consumers, political representatives). We will focus on non-financial markets, as financial markets are well-covered in other courses.
Instructor(s): Kathryn Ierulli Terms Offered: Autumn
Prerequisite(s): PQ: PBPL 20000 or equivalent

Equivalent Course(s): PBPL 28670

ECON 28060. The Economics of Organizations: An Experimental Perspective. 100 Units.
This course offers an introduction to the experimental methodology while at the same time providing the students with up-to-date insights and findings on how to run an organization and how to manage a workforce. Students will learn the basics of the experimental methodology, learn about the most ground-breaking findings in experimental economics related to the functioning of firms, and know the relevant papers and findings in organizational and personnel economics with a particular emphasis on the question of how to set incentives for workers.
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/23400/24400/24410/ECON 21010

ECON 28620. Crony Capitalism. 100 Units.
The economic system prevailing in most of the world today differs greatly from the idealist version of free markets generally taught in economic classes. This course analyzes the role played by corporate governance, wealth inequality, regulation, the media, and the political process in general in producing these deviations. It will explain why crony capitalism prevails in most of the world and why it is becoming more entrenched also in the United States of America. The course, which requires only basic knowledge of economics, welcomes undergraduates. This is a cross-listed course offered under BUSN 35225 for Booth students and ECON 28620 for non-Booth students. Booth students will bid on BUSN 35225. Non-Booth student can register under ECON 28620 or, if space is available, enroll via the non-Booth registration process for BUSN 35225. ECON 28620 is not eligible for pass/fail.
Instructor(s): L. Zingales Terms Offered: Spring
Equivalent Course(s): BUSN 35225

ECON 29200. Issues and Methods in Microeconomics. 100 Units.
Microeconomics is the study of how agents make optimal choices when facing constraints. The course will start with a quick refresher in the "Economic Approach" as the basic tool for analysis in economics. We will continue with a model of causal inference, and link it with concepts students have learned in the econometrics course. Then, we introduce the use of experiments as an alternative methodology for the researchers to gather their own data. Finally, we cover some major topics in behavioral economics.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 20000/20010
Note(s): Study Abroad

ECON 29300. Issues and Methods in Macroeconomics. 100 Units.
Using tools and methods in economics, we will study issues in macroeconomics and international trade and finance. The topics we cover include both contemporary and classical issues such as tax incidence and distortions, optimal taxation, inflation, monetary policy, patterns and benefits of trade, and exchange rate determination. The objective of the course is to train students with analytical tools in macroeconomics so that they can understand, analyze, and evaluate various policies and policy proposals. To make the subject matters relevant and practical, students are strongly encouraged to read the Wall Street Journal and the Economist regularly to keep up with current events and controversies.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 20200/20210
Note(s): Study Abroad

ECON 29700. Undergraduate Reading and Research. 100 Units.
Students are required to submit the College Reading and Research Course Form. Prerequisite(s): Consent of directors of the undergraduate program
Instructor(s): J. Wong Terms Offered: Autumn Spring Winter
Prerequisite(s): Consent of directors of the undergraduate program

ECON 29800. Undergraduate Honors Workshop. 100 Units.
For details, see the preceding Honors section.
Instructor(s): K. Yoshida, V. Lima Terms Offered: Autumn Spring Winter
Prerequisite(s): Faculty sponsorship and consent of honors workshop supervisors

Economics Master's (ECMA) Courses

ECMA 30750. The Theory of Market Design. 100 Units.
This course will provide an introduction to social choice, two-sided matching, house allocation, school choice, and the recent theoretical developments in kidney exchange. We will develop formal, mathematical language to evaluate and compare different mechanisms including deferred acceptance, top trading cycles, the probabilistic serial mechanism and others. Our approach will be axiomatic; we will explore the tradeoff between the efficiency, incentive compatibility and fairness in the design of mechanisms. This course will be proof-based, so is appropriate for advanced students acquainted with formal mathematical reasoning.
Instructor(s): J. Root Terms Offered: Autumn
Prerequisite(s): ECON 20100/20110 and MATH 20300/20310/20700

ECMA 30770. Decision and Strategy. 100 Units.
This course provides a formal introduction to game theory with applications in economics. We will study models of how individuals make decisions, and how those decisions are shaped by strategic concerns and

uncertainty about the world. The topics will include the theory of individual choice, games of complete and incomplete information, and equilibrium concepts such as Nash equilibrium. The applications will include oligopoly, auctions, and bargaining. The course is appropriate for advanced undergraduates who are interested in a rigorous mathematical approach to understanding human behavior.
Instructor(s): B. Brooks Terms Offered: TBD
Prerequisite(s): Prerequsites for Undergraduates: ECON 20100/ECON 20110 and MATH 20300/MATH 20310/ MATH 20700, or consent of instructor
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770/ECMA 30770] toward the 42 credits required for graduation.
Equivalent Course(s): ECON 20770

ECMA 30780. Decision and Strategy II. 100 Units.
We continue the formal introduction to decision theory and game theory begun in ECMA 30780, with a specific focus on models of incomplete information. Topics covered include subjective expected utility, Bayesian games, contract theory, and mechanism design. Among the applications we will consider are auctions, collusion, entry deterrence, and strategic communication. The course is appropriate for advanced undergraduates who are interested in a rigorous mathematical approach to decision making in strategic situations.
Instructor(s): B. Brooks Terms Offered: TBD
Prerequisite(s): ECON 20770/ECMA 30770 or consent of instructor
Equivalent Course(s): ECON 20780

ECMA 30800. Theory of Auctions. 100 Units.
In part, this course covers the analysis of the standard auction formats (i.e., Dutch, English, sealed-bid) and describes conditions under which they are revenue maximizing. We introduce both independent private-value models and interdependent-value models with affiliated signals. Multi-unit auctions are also analyzed with an emphasis on Vickrey's auction and its extension to the interdependent-value setting.
Instructor(s): P. Reny Terms Offered: Winter
Prerequisite(s): PQ for Undergraduates: ECON 20100 (or Econ 20110), and MATH 20300 (or Math 20310 or Math 20700), and STAT 23400, 24400 or STAT 24410

ECMA 31000. Introduction to Empirical Analysis. 100 Units.
This course introduces students to the key tools of econometric analysis: Probability theory, including probability spaces, random variables, distributions and conditional expectation; Asymptotic theory, including convergence in probability, convergence in distribution, continuous mapping theorems, laws of large numbers, central limit theorems and the delta method; Estimation and inference, including finite sample and asymptotic statistical properties of estimators, confidence intervals and hypothesis testing; Applications to linear models, including properties of ordinary least squares, maximum likelihood and instrumental variables estimators; Non-linear models. Assignments will include both theoretical questions and problems involving data. Necessary tools from linear algebra and statistics will be reviewed as needed.
Instructor(s): J. Hardwick Terms Offered: Autumn
Prerequisite(s): PQs for Undergraduates: Econ 21030 or Econ 21110 or Econ 21130

ECMA 31100. Introduction to Empirical Analysis II. 100 Units.
This course is an introduction to applied econometrics and builds on tools studied in ECMA 31000. Topics include: Selection on observables, instrumental variables, time series, panel data, discrete choice models, regression discontinuity, nonparametric regression, quantile regression.
Instructor(s): J. Hardwick Terms Offered: Winter
Prerequisite(s): Prerequisite for Undergraduates: Econ 21030 or Econ 21110 or Econ 21130 or ECMA 31000 or ECMA 31130. Undergraduates who have taken Econ 21020 are encouraged to obtain instructor consent for enrollment.

ECMA 31130. Topics in Microeconometrics. 100 Units.
This course focuses on micro-econometric methods that have applications to a wide range of economic questions. We study identification, estimation, and inference in both parametric and non-parametric models and consider aspects such as consistency, bias and variance of estimators. We discuss how repeated measurements can help with problems related to unobserved heterogeneity and measurement error, and how they can be applied to panel and network data. Topics include duration models, regressions with a large number of covariates, non-parametric regressions, and dynamic discrete choice models. Applications include labor questions such as labor supply, wage inequality decompositions and matching between workers and firms. Students will be expected to solve programming assignment in R.
Instructor(s): T. Lamadon Terms Offered: Winter
Prerequisite(s): Prerequisites for Undergraduates: ECON 21020 OR ECON 21030

ECMA 31140. Perspectives on Computational Modeling for Economics. 100 Units.
In this course students will learn several computational methodologies and tools to solve, simulate, and analyze models that are the backbone of current macroeconomic analysis. While learning the relevant computational methods is the main objective, the theoretical economic aspects of the model will be stressed and the students will be required to apply their economic knowledge and skills to interpret and analyze the results. We will examine non-stochastic and stochastic general equilibrium models, both under local and global approximations.

The main part of the course will deal with representative agent models, but a significant part will be devoted to introducing students to the solution of heterogeneous agent models as well.
Instructor(s): Sergio Salas Terms Offered: Winter
Prerequisite(s): PQ for undergraduates: Econ 20200/20210 and MATH 19620/Stat 24300/Math 20250 and Stat 23400/Stat 24400/Stat 24410.
Note(s): MACSS students have priority.
Equivalent Course(s): MACS 10150, MACS 30150

ECMA 31210. Time Series Analysis for Macroeconomics and Finance. 100 Units.
This course will cover various methods and their applications in time series analysis and emphasize empirical exercises by students. The structure of the course starts with theoretical foundations drawing from standard textbooks of Hayashi (2000) and Hamilton (1994) and covers applications to answer important questions in macro and finance. The topics include time series OLS with applications in the Fama interest rate regression and Hansen's study of foreign exchange markets, GMM with the Fama-French model of equity returns, and state-space models with applications to GDP nowcasting. Familiarity with matrix algebra and elementary econometrics is required.
Instructor(s): F. Hayashi Terms Offered: Spring
Prerequisite(s): Prerequisites for Undergraduates: ECON 20200/20210 and ECON 21020/21030
Note(s): This course may count as a data science course for the data science specialization in the same set of options as ECON 21300, ECMA 31320, ECMA 31330, ECMA 31340, ECMA 31350 or ECMA 38010.

ECMA 31320. Applications of Econometric and Data Science Methods. 100 Units.
This course builds on the theoretical foundations set in Econ 21030 and explores further topics pertinent to modern economic applications. While the course content may change from year to year according to student and instructor interests, some potential topics are panel data methods, treatment effects/causal inference, discrete choice/limited dependent variable models, demand estimation, and topics in economic applications of supervised and unsupervised learning algorithms. The course will involve analytically and computationally intensive assignments and a significant empirical project component.
Instructor(s): A. Hortacsu Terms Offered: Spring
Prerequisite(s): CMSC 12300/14200/15200/16200 and ECON 21020 (ECON 21030 Honors Econometrics preferred) or consent of instructor

ECMA 31330. Econometrics and Machine Learning. 100 Units.
This course reviews a number of modern methods from econometrics, statistics and machine learning, and presents applications to economic problems. Examples of methods covered are simulation-based techniques, regularization via coefficient and matrix penalization, and regression and classification methods such as trees, forests and neural networks. Applications include economic models of network formation, and dimension reduction for structural economic models. The course involves programming and work with data. Beyond econometric background such as Econ 21030, students should have a solid background in computation.
Instructor(s): S. Bonhomme Terms Offered: Not offered in 2022-2023
Prerequisite(s): CMSC 12300/14200/15200/16200 and ECON 21020 (ECON 21030 Honors Econometrics preferred)

ECMA 31340. Big Data Tools in Economics. 100 Units.
The goal of the class is to learn how to apply microeconomic concepts to large and complex datasets. We will first revisit notions such as identification, inference and latent heterogeneity in classical contexts. We will then study potential concerns in the presence of a large number of parameters in order to understand over-fitting. Throughout the class, emphasis will be put on project-driven computational exercises involving large datasets. We will learn how to efficiently process and visualize such data using state of the art tools in python. Topics will include fitting models using Tensor-Flow and neural nets, creating event studies using pandas, solving large-scale SVDs, etc.
Instructor(s): T. Lamadon Terms Offered: Winter
Prerequisite(s): PQs for Undergraduates:ECON 20100/20110 and ECON 21020/21030

ECMA 31350. Machine Learning for Economists. 100 Units.
This course reviews modern machine learning techniques and their applications in economics. The course covers some of the classical techniques, including lasso, regression trees, random forests, principal components analysis, and neural networks, as well as cutting-edge double machine learning methods. Applications include economic models of network formation, program evaluation, demand estimation, and asset pricing. The course involves programming and working with data. Students are expected to have a solid background in statistics, econometrics, and computation.
Instructor(s): K. Ponomarev Terms Offered: Winter
Prerequisite(s): For Undergraduates: CMSC 12300//14200/15200/16200 and ECON 21020 (ECON 21030 Honors Econometrics preferred)

ECMA 31360. Causal Inference. 100 Units.
This course reviews modern causal inference techniques and their applications in business and economics. The course covers the treatment-control comparison estimator, regression adjustment, matching (on covariates and propensity score), difference in differences (canonical and with staggered treatment), panel data methods, regression discontinuity design (sharp and fuzzy), instrumental variables and local average treatment effect (LATE) estimator. At different points during the course, we mention how machine learning (ML) techniques

have recently been used to enrich the classical methods. The course involves programming (R language) and working with data. Students are expected to have a solid background in statistics (working knowledge of R and familiarity with RStudio) and econometrics.
Instructor(s): M. Tartari Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 21020/21030

ECMA 31380. Causal Machine Learning. 100 Units.
By the end of this course students should understand the recent research and methods in statistical inference after machine learning. Chiefly, this course focuses on causal inference, but other topics are covered as well. The course aims for a theoretical understanding and as well as ready-to-deploy tools. Students will be introduced to the theoretical underpinnings of this material, which includes studying topics in nonparametric estimation, two-step and semiparametric inference theory, including the special case of double/debiased machine learning. Methods discussed include neural networks, random forests, and LASSO estimation.
Instructor(s): M. Farrell Terms Offered: Autumn
Prerequisite(s): PQ for Undergraduates: ECON 21020/21030
Note(s): This course may count toward the Data Science course requirement of the Economics Data Science Specialization.

ECMA 33220. Introduction to Advanced Macroeconomic Analysis. 100 Units.
This course introduces students to advanced methods for macroeconomic analysis. In the first part, we discuss time series methods such as impulse response analysis, vector autoregression, co-integration, shock identification, and business cycle detrending. In the second part, we examine and analyze a simple, yet powerful stochastic dynamic real business cycle model. In that context, the students will learn about dynamic programming, rational expectations, intertemporal optimization, asset pricing, the Frisch elasticity of labor supply, log-linearization, and computational tools to solve for the recursive law of motion of dynamic stochastic general equilibrium models. Finally, we touch upon some further models, such as the overlapping generations model and/or the continuous-time neoclassical growth model. The course is useful for students interested to deepen their knowledge in macroeconomics, in order to read, understand, and replicate some of the recent research in the field; as preparation for careers involving macroeconomic analysis, time series analysis, or asset pricing; or as preparation for graduate school. Decent knowledge of linear algebra and calculus is required. All advanced material will be taught in class.
Instructor(s): H. Uhlig Terms Offered: Autumn
Prerequisite(s): ECON 20200 (or ECON 20210) and ECON 21020 (or ECON 21030)

ECMA 33221. Introduction to Advanced Macroeconomic Analysis II. 100 Units.
This course introduces concepts and tools for advanced macroeconomics. It builds on ECMA 33220. We discuss the decision of consumption and investment over time, monetary economics, fiscal policy, asset pricing, and international economics. We introduce numerical methods to solve problems in economics and finance such as methods to solve nonlinear equations and to generate random numbers. These methods are useful when we solve economic models through value-function iterations, quadratic linearization, and other methods. Some topics discussed are the welfare cost of inflation, portfolio allocation, the yield curve and economic activity, optimal taxation, and financial markets and monetary policy. As ECMA 33220, this course is useful for students interested in increasing their knowledge in macroeconomics for careers involving macroeconomic analysis and as preparation for graduate school. Knowledge of calculus and linear algebra is expected.
Instructor(s): A. Silva Terms Offered: Winter
Prerequisite(s): For Undergraduates: ECON 20200/20210 and ECON 21020/21030

ECMA 33230. Macroeconomic Crises. 100 Units.
This course introduces students to economic theories of "crises" or particular periods of rapid (negative) changes in real and financial variables that are distinct from long-run growth and regular business cycles. In particular, we will cover the origin of various types of financial crises, i.e. speculative bubbles, bank runs, credit crunches, and sovereign debt crises and defaults. Time permitting, we will also study currency crises and speculative attacks. Throughout, our focus will be on the implications for fiscal and monetary policy.
Instructor(s): N. Balke Terms Offered: Winter
Prerequisite(s): ECON 23950 and ECON 21020 (or ECON 21030)

ECMA 33330. Introduction to Dynamic Economic Modeling. 100 Units.
This course provides an introduction to dynamic economic models, with applications to macroeconomics, labor economics, financial economics, and other subfields of economics. The core methodology will be consistent over time, but the applications will vary from year to year. The course will analyze decentralized equilibrium and social planner's problems in dynamic environments. It will focus on developing techniques for analyzing such models graphically, analytically, and computationally. Students should be familiar with constrained optimization (e.g. Lagrangians), linear algebra, and difference equations, as well as microeconomics, macroeconomics, and econometrics at an intermediate level.
Instructor(s): R. Shimer
Prerequisite(s): ECON 20200 (or ECON 20210) and ECON 21020 (or ECON 21030)

ECMA 33603. Introduction to Macroeconomics and Financial Frictions. 100 Units.
This course studies the behavior of consumers, investors, and firms when they face frictions to take their decisions. These frictions can be in the form of costs to change portfolios, to change prices, or to find another

investor to trade. Frictions also appear in the form of borrowing costs, the possibility of default, or the need to use money to carry on transactions. We show how taking into account these frictions change predictions about the economy. Borrowing constraints, for example, affect interest rates, and the need to rebalance portfolios changes predictions on optimal taxation. We discuss models, techniques and papers that show the relevance of frictions for economic analysis.
Instructor(s): A. Silva Terms Offered: Spring
Prerequisite(s): PQ for Undergraduates: ECON 20200/20210 and ECON 21020/21030

ECMA 33620. Introduction to Heterogeneous Agent Macroeconomics. 100 Units.
This class is an introduction to macroeconomics with heterogeneous households. We will study consumption-savings problems, income dynamics, wealth inequality in partial and general equilibrium, and the effects of fiscal and monetary policy in the presence of household inequality. The class will make use of theoretical analysis, empirical analysis and computational methods. Material will be presented in both discrete and continuous time. Students will analyze micro-level data on wealth, income and consumption, and will learn how to write code to solve heterogeneous agent models on a computer. Familiarity with a statisical package such as R or Stata, and a programming language such as Matlab, Python, Julia, Fortran or C is highly recommended.
Instructor(s): G. Kaplan
Prerequisite(s): Undergraduates: PQ: ECON 20200/20210 and ECON 21020/21030

ECMA 34150. Origins, Persistence, and Consequences of Inequality. 100 Units.
The continued rise of economic inequality in the U.S. has spurred heated debate among economists and policymakers over the past several years. This course aims to provide students with a comprehensive understanding of social science perspectives on inequality, including its causes, persistence, and effects. It also introduces students to different frameworks for discussing inequality and how societal forces contribute to increasing inequality. Additionally, the course helps students connect broader societal trends with specific government policies. By covering key vocabulary, concepts, theories, and debates related to economic inequality, the course lays a solid foundation for further studies in economics. Upon completion of the course, students should possess a deeper understanding of the facts about inequality and social mobility, as well as a grasp of the complexity of the problem and challenges inherent in addressing these issues through governmental policies. Specifically, students are anticipated to be able to: - Articulate economic terminology and methods for measuring inequality, - Perform calculations to assess and illustrate income/wealth inequality, and economic mobility, - Analyze the root causes, mechanisms, and consequences of economic inequality, - Demonstrate a nuanced comprehension of the policy and political ramifications associated with inequality.
Instructor(s): S. Eshaghnia Terms Offered: Autumn
Prerequisite(s): PQ for Undergraduates: ECON 21020/21030

ECMA 35050. Information and Financial Markets. 100 Units.
This course studies the information economics that underlies modern financial markets and trading. Whether one is into designing new financial marketplaces (for example: fintech, crypto) or creating new trading strategies (for example: high-frequency, active management) or managing complex investment portfolios (for example: hedge funds, pension funds), tools from the economics of information asymmetry play an essential role. We take a deep dive into the technical tools that are commonly used and explore applications that help us place the techniques in context. Topics covered include: Lotteries, Measures of risk aversion, Orders of stochastic dominance, vNM and Savage utilities, Information structures, Blackwell ordering, Bayesian inference, Common knowledge and belief hierarchies, Agreement and No-trade theorems, Grossman-Stiglitz type paradoxes, Role of noise in markets, Kyle and Golsten-Milgrom models of trading and PIN models, along with Dealer, limit-order, automated-market-making and batch-auction market structures.
Instructor(s): A. Bhattacharya Terms Offered: Autumn
Prerequisite(s): PQ for Undergraduates: ECON 20200/20210 and STAT 23400/24400/24410

ECMA 35550. The Practicalities of Running Randomized Control Trials. 100 Units.
This course is designed for those who plan to run a randomized control trial. It provides practical advice about the trade-offs researchers face when selecting topics to study, the type of randomization technique to use, the content of a survey instruments, analytical techniques and much more. How do you choose the right minimum detectable effect size for estimating the sample size needed to run a high quality RCT? How do you quantify difficult to measure outcomes such as women's empowerment or ensure people are providing truthful answers when you are asking questions on sensitive topics like sexual health? When should you tie your hands by pre-committing to your analysis plan in advance, and when is a pre-analysis plan not a good idea? This course will draw on lots of examples from RCTs around the world, most (though not all) from a development context. Alongside field tips, it will also cover the concepts and theory behind the tradeoffs researchers face running RCTs. The course is designed for PhD students but given its practical nature is open to and accessible to masters students who plan to work on RCTs.
Instructor(s): Glennerster, Rachel Terms Offered: Autumn
Equivalent Course(s): ECON 35550, PPHA 35561

ECMA 36700. Economics of Education. 100 Units.
This course explores economic models of the demand for and supply of different forms of schooling. The course examines the markets for primary, secondary, and post-secondary schooling. The course examines numerous public policy questions, such as the role of government in funding or subsidizing education, the design of public

accountability systems, the design of systems that deliver publicly funded (and possibly provided) education, and the relationship between education markets and housing markets.
Instructor(s): D. Neal
Prerequisite(s): ECON 21020 or ECON 21030
Equivalent Course(s): PBPL 26705, EDSO 26700

ECMA 38010. Empirical Industrial Organization. 100 Units.
This course will provide an introduction to state-of-the-art methodologies in Empirical Industrial Organization. We will use real-life data to learn about consumers and firms. We will cover demand and preference estimation, production function estimation, empirical models of market entry, and auctions. We will also discuss applications including prediction, policy analysis, and price optimization. Students will learn about theory, estimation, optimization, and practical considerations. Students will apply what they learn using R.
Prerequisite(s): Prerequisites for Undergraduates: ECON 20100/20110 and ECON 21020/21030

Business Economics Courses

BUSN 20550. Application Development. 100 Units.
The new reality is that every company is a software company. Even in traditionally brick-and-mortar industries, software is performing more and more of the work. Many companies (especially "lean startups") are purely software-based. Lacking an understanding of how software works and how software is built puts you at a disadvantage. Our goal is to develop an understanding of both. We believe the best way to do that is to build something yourself, using modern languages and workflows. You will build a functional prototype of your own app idea, and will learn the Ruby on Rails web application framework. Higher-level goals are to: 1. Understand the general, platform-independent patterns of how apps work. 2. Communicate more effectively and credibly. 3. Develop a builder's eye for problems that can be solved with technology. 4. Prioritize features more intelligently by developing a better feel for their costs. 5. Implement a modern software development workflow, from task management to version control to quality assurance to deployment. 6. Be able to make and test small changes to an app yourself. This course is entirely project-driven. We will build a series of apps in class. Also, you will build your own app idea which will be your final project. This course is designed for a beginner who has never programmed before. Note: Due to the intensive support requirements and volume of requests, we can't allow auditors.
Instructor(s): R. Betina; Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20550 if BUSN 36110 Application Development taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course. BUSN 20550 (and BUSN 36110) cannot count toward the standard economics major electives or the business economics specialization electives.

BUSN 20930. Social Sector Strategy and Structure. 100 Units.
The social sector, which encompasses nonprofit & for-profit firms that are primarily pursuing a solution to social or environmental issues, is an increasingly important sector. This course provides an overview of the structures, strategy frameworks, and management tools employed by social sector organizations to ensure that they deliver on the impact they seek. In particular, the course examines those approaches that differ from managing a non-impact seeking venture. The same fundamental approaches to marketing, competitive analysis, etc. can be translated across contexts. Where there are differences, however, they are important. We will review & analyze the distinctive challenges of managing for social or environmental impact, as opposed to profit maximization. We will use cases & exercises to examine and unpack social sector management and strategy. This includes how organizations are structured from a tax-status perspective; common business models; management tools such as the construct of theory of change/intended impact, impact measurement, marketing to donors & beneficiaries; managing paid & unpaid labor; funding sources such as philanthropy & impact investing; governance; and scale and growth. This is a "survey course" of the management tools, strategy frameworks, and structural approaches used in the social sector. It is not deep dive into any of these topics, and is designed to provide any student with a working knowledge of managing social sector organizations.
Prerequisite(s): This course is not open to MBA students. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

Accounting Courses

BUSN 20100. Financial Accounting. 100 Units.
This course provides an introduction to financial statements and the financial reporting process from a user's perspective. The focus of the course is on fundamental accounting concepts and principles. Students learn how the economic transactions of a firm are reported in the financial statements and related disclosures. The objective of the course is to provide students with basic skills necessary to read and analyze financial statements as well as to prepare students for more advanced financial statement analysis courses.
Terms Offered: Autumn Spring Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20100 if BUSN 30000 Financial Accounting taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20101. Managerial Accounting. 100 Units.
This course focuses on internal operations, cost analysis, and performance evaluation, as opposed to the evaluation of external financial statements. Its targeted audience includes students intending become management consultants, entrepreneurs, managers (e.g., CEOs, CFOs, COOs, and product managers), and anyone with an interest in understanding how firms (1) make decisions about products and services and (2) evaluate performance and control risk. Topics covered include overhead allocation, activity based costing, opportunity cost of excess capacity, customer profitability, capital budgeting, transfer pricing, performance evaluation, risk management, internal controls, and fraud. Applications cover both the manufacturing and services sectors.
Instructor(s): Faculty TBD Terms Offered: TBD
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20101 if BUSN 30001 Cost Analysis and Internal Controls taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20140. Accounting and Financial Analysis. 100 Units.
Course is designed to improve students' understanding of financial information beyond an intro accounting class. It is designed to provide the knowledge of financial statements necessary to conduct a reasonably sophisticated financial statement analysis. Focus is on the use of financial statements, although this requires some understanding of the process by which financial statements are produced. It will benefit students who want to become investment bankers, economic consultants, analysts, or other jobs that requires more than a superficial understanding of financial reporting. Not limited to study of financial statements. Will also work with supplemental disclosures, which help the user to interpret the financial statements and to understand better the economic transactions that gave rise to them. Techniques employed will be useful for variety of purposes including (but not limited to) equity, credit, and complex deals (such as M&A) analysis. Although this course does not cover forecasting, valuation, or models of complex deals, a thorough understanding of financial reporting issues is critical to being able to use such techniques. This course especially useful as a prelude to Financial Statement Analysis (B20150/B30130), Advanced Financial Analysis and Valuation for Global Firms (B30131), and Deal Structuring and Financial Reporting Implications (B30122). Must submit answers to 5 cases based on actual financial statements. There are two in-person exams (Weeks 5 & 10).
Instructor(s): H. Christensen Terms Offered: Autumn
Prerequisite(s): Strict PQ: BUSN 20100 (or 30000). To register for this class, students must have taken BUSN 20100 or 30000. NEGPQ BUSN 30116 - Students cannot enroll in this class if they have taken BUSN 30116. All first year college students are restricted from enrolling in this course; new transfer students ok.

BUSN 20150. Financial Statement Analysis. 100 Units.
This course teaches you how to analyze financial statements in order to develop financial statement models, assess credit risk, and, ultimately, value a company. The course provides both a framework and the tools necessary to analyze financial statements. Its primary objective is to advance your understanding of how financial reporting can be used in a variety of decisions (e.g., lending and investment decisions) and analyses (e.g., financial distress and bankruptcy prediction). It is applied in nature and stresses the use of actual financial statements. Throughout the course, I draw heavily on real business examples and use cases to illustrate the application of the techniques and tools. Topics include traditional ratio analysis techniques, accounting analysis (i.e., identifying earnings management and accounting quality issues), and financial risk assessment. The second part of the course focuses on equity valuation, e.g., the preparation of pro forma financial statements, and the use of various valuation models. While students with a multitude of interests will benefit from this course, students with an interest in investment banking, equity or credit analysis, consulting, strategy, corporate finance, or management will find this course particularly relevant.
Instructor(s): Faculty TBD Terms Offered: Spring
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20150 if BUSN 30130 Financial Statement Analysis taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course. Financial Accounting (BUSN 20100 or BUSN 30000) is a strict prerequisite.

BUSN 20170. Tax Strategies. 100 Units.
This course provides students with a framework for thinking about tax planning. This framework has two principal advantages. First, it is designed to have value long after the recent and next tax law change. Second, the framework is portable, in that it can be applied to any set of tax laws - those of the United States or any other country. Although the course generally focuses on U.S. based transactions and planning examples, the underlying ideas are applicable in other jurisdictions. Once developed, the framework is applied to a variety of business settings. The applications integrate concepts from finance, economics, and accounting to achieve a more complete understanding of the role of taxes in business strategy. The course also includes periodic focus on the financial accounting ramifications of tax planning. Moreover, the course content has valuation related implications. Topics include the following: tax planning for mergers, acquisitions, and divestitures; taxation of structures for new businesses (e.g., C Corps, and LLCs); tax planning for financing transactions, including cross-border financing, executive compensation (e.g., incentive stock options); and others.
Terms Offered: TBD

Prerequisite(s): All first year college students are restricted from enrolling in this course; new transfer students ok.

BUSN 20180. Advanced Financial Analysis and Valuation for Global Firms. 100 Units.
The course covers advanced financial analysis and valuation for global firms. It is designed for students who already have a basic familiarity with corporate valuation and DCF analysis (from corporate finance class) as well as solid accounting knowledge. We cover financial analysis of different business models, specific situations (e.g., cyclicals, young growth companies, closely-held firms) as well as the analysis and valuation of foreign companies (e.g., emerging markets, reporting under IFRS). Capital markets have become increasingly global, providing more opportunities for corporate investments and M&A abroad. Evaluating these global investments, however, poses unique challenges for financial analysis (e.g., regarding information, accounting and governance) as well as valuation problems.
Prerequisite(s): Investments (BUSN 20400 or 35000), corporate finance (BUSN 20410 or 35200) and accounting (BUSN 20100 or 30000) all helpful background for success in this class. Cannot take BUSN 20180 if BUSN 30131 taken previously.

Entrepreneurship Courses

BUSN 20330. Building the New Venture. 100 Units.
This course is intended for students who are interested in starting new entrepreneurial businesses. It is tactical, hands-on, and covers the nuts and bolts of starting a company with a lesser emphasis on investing in entrepreneurial ventures. Students will learn how to raise seed funding, compensate for limited human and financial resources, establish brand values and positioning, secure a strong niche position, determine appropriate sourcing and sales channels, and develop execution plans in sales, marketing, product development and operations. The emphasis is managerial and entrepreneurial, essentially a working model for starting an enterprise. This class is executed through a combination of lectures, group assignments based on student's new venture ideas, case discussions, VC and entrepreneur guest lectures and panels, and ultimately ties together in a pitch at the end of the quarter to a panel of VC observers.
Instructor(s): C. Przybyl Terms Offered: Autumn
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20330 if BUSN 34103 Building the New Venture taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20340. Developing a New Venture. 100 Units.
The course is designed to guide groups of students through the new venture creation process. Students will have passed through the 1st round of the College New Venture Challenge, & will be developing their own original new business ideas. Students may enter the course with ideas that are traditionally for-profit in nature or more socially oriented (either for- or not-for-profit ventures). Students can expect to learn: •
Instructor(s): S. Marcello Terms Offered: Winter
Prerequisite(s): This course is not open to MBA students. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course. Consent only: Students will have passed through the first round of the College New Venture Challenge. Students may enroll in both BUSN 20340 and BUSN 34104 Special Topics in Entrepreneurship: Developing a New Venture (New Venture Challenge), but may receive credit for only one within the Entrepreneurship bundle of the business economics specialization.

BUSN 20920. Social Entrepreneurship and Innovation. 100 Units.
We will study social innovation with a focus on the role of social entrepreneurship for implementing innovative solutions to society's problems. A team of 4 students will be assigned with an innovative idea that addresses a social problem and could become a (for-profit or non-profit) social venture. Students will provide their preferences for assignment from a list of preselected ideas. Teams will essentially develop a business idea around this innovation. To achieve this, students will research the relevant literature, conduct customer discovery, analyze the competitive landscape, validate and refine the offering, propose a business model, articulate a theory of change, and identify an impact management strategy. Teams will present to the idea sponsor at the end of the quarter and in a mid-quarter check-in. The hope is that there will be sufficient validation and interest to move forward with some of these ventures with students involved in or leading the venture. One path is to participate in the John Edwardson, '72, Social New Venture Challenge. Much of class time will be devoted to group exercises to implement frameworks to answer these questions for the projects as well as a set of case study examples we will use throughout the course. In addition, there will be readings and discussions on a set of topics to provide a broader understanding of the economics of social innovation and its relationship to more traditional innovation. Grading will be based weekly project
Terms Offered: TBD
Prerequisite(s): Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20920 if BUSN 34117 Social Entrepreneurship and Innovation taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https:// tinyurl.com/y8wz3oge. All first year College students are restricted from enrolling into this course.

Finance Courses

BUSN 20400. Investments. 100 Units.
This course offers the financial theory and quantitative tools necessary for understanding how stock, bond, and option prices are determined, and how financial assets are used for investment decisions. Topics covered include the following: the term structure of interest rates; portfolio selection based on mean-variance analysis; models of risk and return (including the CAPM and multifactor models); performance evaluation; market efficiency and the random walk hypothesis; asset pricing anomalies and behavioral finance; derivative security pricing (including options, futures, forwards, and swaps); and international investment. This course is not open to MBA students.
Instructor(s): A. Zhang; Q. Vandeweyer Terms Offered: Spring Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20400 if BUSN 35000 Investments taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20405. Financial Instruments. 100 Units.
This course develops, critically assesses, and applies theories of pricing derivatives. Topic discussed are: forward and futures contracts; interest rate and currency swaps; option trading strategies; binomial option pricing; the Black-Scholes-Merton option pricing model and extensions; risk management with options; empirical evidence and time-varying volatility; the pricing and hedging of corporate securities (common stock, senior and junior bonds, callable bonds, warrants, convertible bonds, and putable bonds); credit risk; and real options.
Instructor(s): J. Heaton Terms Offered: Autumn
Prerequisite(s): There are no enforced prerequisites but Investments (Business 20400/35000) is helpful. This course is not open to MBA students. Cannot enroll in BUSN 20405 if BUSN 35100 Financial Instruments taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20410. Corporation Finance. 100 Units.
This course provides you with an understanding of major decisions made by corporate financial managers and to familiarize you with the tools used to make these decisions. The first part of the course covers methods used to value investment opportunities. Particular attention is given to discounted cash flow valuation, including the methods of weighted average cost of capital (WACC) and adjusted present value (APV). The second part of the course focuses on issues of corporate financial structure. The focus will be on the choice of financing through equity, debt and other types of securities and on payout policies through dividends. Specialized topics, such as mergers and acquisitions and corporate hedging will be covered as time permits.
Instructor(s): E. Jiang; C. Yannelis Terms Offered: Spring Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20410 if BUSN 35200 Corporation Finance taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course. Financial Accounting (BUSN 20100 or 30000) required. Investments (BUSN 20400 or 35000) strongly recommended.

Management Courses

BUSN 20600. Marketing Management. 100 Units.
The objective of the course is to provide an intro to marketing strategy. The course develops a common framework (3Cs/4Ps) to analyze real world problems presented in business cases and synthesize recommendations addressing strategic marketing issues. Numerous tools used to support the framework are also introduced. GOALS: 1. Introduce marketing strategy and elements of marketing analysis or business situation analysis: Customer analysis, Company analysis and Competitor analysis (3Cs). 2. Develop familiarity with tactical use of elements of the marketing mix - product policy, pricing, promotion and placement/distribution (4 Ps)-in a manner consistent with marketing analysis and strategy. 3. Integrate elements of the framework prescriptively into real world business situations. 4. Provide exposure to business case analysis and critical thinking common in case-based business classes. FORMAT: This course uses lectures to introduce concepts, and uses cases and business examples to illustrate them. Grading criteria includes homework assignments/case write-ups, final exam, and class participation that may involve student presentations or in-class exercises.
Instructor(s): J. McKinney Terms Offered: Spring Summer Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20600 if BUSN 37000 Marketing Strategy taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year College students are restricted from enrolling into this course.

BUSN 20701. Managing in Organizations. 100 Units.
Successfully managing other people - be they competitors or co-workers - requires an understanding of their thoughts, feelings, attitudes, motivations, and determinants of behavior. Developing an accurate understanding of these factors, however, can be difficult to achieve because intuitions are often misguided and unstructured experience can be a poor teacher. This course is intended to address this development by providing the scientific knowledge of human thought and behavior that is critical for successfully managing others, and also for successfully managing ourselves.
Instructor(s): A. Todorov Terms Offered: Winter

Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20701 if BUSN 38001 Managing in Organizations taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20702. Managerial Decision Making. 100 Units.
This course is designed to make you a better decision maker. Good decision makers know how to recognize decision situations, then how to represent the essential structure of the situations, and how to analyze them with the formal tools from decision theory. But, perhaps more important, they need to be able to think effectively about the inputs into a decision analysis, whether to trust the analysis, and how to use the outputs to guide actions by themselves and their firms. And, maybe most important of all, they need to know how to make effective, unaided intuitive decisions, and to recognize the limits on their intuitive skills. This course will move back and forth between formal, optimal models and behavioral, descriptive models to help you understand and improve your native decision making abilities.
Instructor(s): R. White Terms Offered: Autumn
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20702 if BUSN 38002 Managerial Decision Making taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20710. Behavioral Economics. 100 Units.
Behavioral economics applies psychological insights to economic markets and decision making. In this class, we will discuss the recent theoretical and empirical advances that have been made in this increasingly important field of economics. Being thoughtful about the role of psychology can lead to a greater understanding of how the economy works.
Instructor(s): D. Pope; A. Imas Terms Offered: Spring Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20710 if BUSN 38120 The Study of Behavioral Economics taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20711. Choosing Leadership. 100 Units.
Get a head start on your personal leadership development journey by asking critical questions that most others wait to ask such as: What makes me a good leader? How can I improve my leadership skills? How can I add value by creating meaning? What is my definition of leadership? This course is about the practice of leadership. We take the approach that leadership development is an ongoing process of self-discovery. The content is based on insights from the core discipline of social psychology. Students use the data of their own experience as input together with a series of written assignments and in-class activities, including discussions, films, simulations, and peer coaching. The course enables students to engage in reflection, explore values and assess how they want to skillfully apply these lessons to their own leadership practice. No prerequisites.
Terms Offered: TBD
Prerequisite(s): This course is not open to MBA students. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year College students are restricted from enrolling into this course.

Marketing Courses

BUSN 20600. Marketing Management. 100 Units.
The objective of the course is to provide an intro to marketing strategy. The course develops a common framework (3Cs/4Ps) to analyze real world problems presented in business cases and synthesize recommendations addressing strategic marketing issues. Numerous tools used to support the framework are also introduced. GOALS: 1. Introduce marketing strategy and elements of marketing analysis or business situation analysis: Customer analysis, Company analysis and Competitor analysis (3Cs). 2. Develop familiarity with tactical use of elements of the marketing mix - product policy, pricing, promotion and placement/distribution (4 Ps)-in a manner consistent with marketing analysis and strategy. 3. Integrate elements of the framework prescriptively into real world business situations. 4. Provide exposure to business case analysis and critical thinking common in case-based business classes. FORMAT: This course uses lectures to introduce concepts, and uses cases and business examples to illustrate them. Grading criteria includes homework assignments/case write-ups, final exam, and class participation that may involve student presentations or in-class exercises.
Instructor(s): J. McKinney Terms Offered: Spring Summer Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20600 if BUSN 37000 Marketing Strategy taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year College students are restricted from enrolling into this course.

BUSN 20610. Pricing Strategy. 100 Units.
This course blends marketing analytic frameworks, marketing strategy & microeconomic theory, and data to formulate actionable pricing strategies. Students will learn how to coordinate pricing decisions with the rest of the marketing value proposition. Numerous pricing structures are developed in the course, along with their

microeconomic foundations. Students will learn the underlying theory for each pricing structure, along with the practical considerations for implementation
Instructor(s): Faculty TBD Terms Offered: TBD
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20610 if BUSN 37202 Pricing Strategies taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20620. Data Driven Marketing. 100 Units.
Marketing decisions in the era of big data are increasingly based on a statistical analysis of large amounts of transaction and customer data that provides the basis for profitability and ROI predictions. The goal of this class is to introduce modern data-driven marketing techniques and train the students as data scientists who can analyze data and make marketing decisions using some of the state-of-the-art tools that are employed in the industry. We will cover a wide range of topics, including demand modeling, the analysis of household-level data, customer relationship management (CRM) and database marketing, and elements of digital marketing. The focus throughout is on predicting the impact of marketing decisions, including pricing, advertising, and customer targeting, on customer profitability and the return on investment (ROI) from a customer interaction.
Instructor(s): G. Compiani Terms Offered: Autumn
Prerequisite(s): BUSN 20600 or BUSN 37000 required prereq. Previous stats background helpful. This course is not open to MBA students. Cannot enroll in BUSN 20620 if BUSN 37105 Data Science for Marketing Decision Making taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

Operations Courses

BUSN 20500. Operations Management. 100 Units.
This core course focuses on understanding levers for structuring, managing, and improving a firm's recurring business processes to achieve competitive advantage in customer responsiveness, price, quality, and variety of products and services. These levers are broadly applicable to service firms, for example banks, hospitals, and airlines, as well as to traditional product-based firms. Processes within firms, as well as between firms, i.e. supply chains, are explored. The fundamental principles underlying state- of-the-art practices, such as Lean, Mass Customization, and Time-Based Competition, are explored so that students learn to critically evaluate these and other operational improvement programs. Students learn the basics of how to manage the operations of a firm, and how operations issues affect and are affected by the many business decisions they will be called upon to make or recommend in their careers. As such, this course is essential to students aspiring to become consultants, entrepreneurs, or general managers. A working knowledge of operations is also indispensable to those interested in marketing, finance, and accounting, where the interface between these functions and operations is critical. Finally, an understanding of how firms become market leaders through operations is important in investment careers. This course is not open to MBA students.
Instructor(s): J. Birge Terms Offered: Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20500 if BUSN 40000 Operations Management: Business Process Fundamentals taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20510. Managerial Decision Modeling. 100 Units.
This course is designed to sharpen students' analytical skills and elucidate quantitative modeling as an aid in managerial decision-making. The course teaches various ways to frame, set up and solve managerial questions about resource allocation, revenue management, finance, marketing, operations and risk analysis using Microsoft Excel, as well as various tools and add-ins. The course will introduce various modeling frameworks and analytical tools in optimization and simulation. Students in this course will become proficient in formulating relevant managerial questions in the language of optimization and simulation modeling, as well as in solving the resulting problems using the frameworks covered in the course and interpreting the results. The course involves hands-on active learning through in-class cases and examples, homework and term project which applies the tools and modeling frameworks learned in the course to a business problem.
Instructor(s): Faculty TBD Terms Offered: TBD
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20510 if BUSN 36106 Managerial Decision Modeling taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20520. Supply Chain Management. 100 Units.
The supply chain of a firm is critical to its performance. Supply chains are networks of organizations that supply and transform materials and distribute final products to consumers. If designed and managed properly, these networks can be a crucial source of competitive advantage for both manufacturing and service enterprises. Students will learn how to examine and improve the flow of materials and information through this network of suppliers, manufacturers, distributors, and retailers in order to match supply with demand (i.e., to get the right products to the right customers in the right amount and at the right time). Key topics include inter- and intra-firm coordination, incentive design, the impact of uncertainty, and the role of information technology.

Special emphasis is given to understanding how the business context shapes managerial decisions regarding the strategic design and management of the supply chain.
Instructor(s): L. DeValve Terms Offered: Autumn
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20520 if BUSN 40101 Supply Chain Strategy and Practice taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

Statistics Courses

BUSN 20800. Big Data. 100 Units.
Big Data is a course about data mining: the analysis, exploration, and simplification of large high-dimensional datasets. Students will learn how to model and interpret complicated `Big Data' and become adept at building powerful models for prediction and classification. Techniques covered include an advanced overview of linear and logistic regression, model choice and false discovery rates, multinomial and binary regression, classification, decision trees, factor models, clustering, the bootstrap and cross-validation. We learn both basic underlying concepts and practical computational skills, including techniques for analysis of distributed data. Heavy emphasis is placed on analysis of actual datasets, and on development of application specific methodology. Among other examples, we will consider consumer database mining, internet and social media tracking, network analysis, and text mining.
Instructor(s): D. Xiu Terms Offered: Winter
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20800 if BUSN 41201 Big Data taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20810. Machine Learning. 100 Units.
Students will learn about state-of-the-art machine learning techniques and how to apply them in business related problems. Techniques will be introduced in the context of business applications and the emphasis will be put on how machine learning can be used to create value and provide insights from data. First, and the biggest, part of the class will focus on predictive analytics. Students will learn about decision trees, nearest neighbor classifiers, boosting, random forests, deep neural networks, naive Bayes and support vector machines. Among other examples, we will apply these techniques to detecting spam in email, click-through rate prediction in online advertisement, image classification, face recognition, sentiment analysis and churn prediction. Students will learn what techniques to apply and why. In the second part of the class, students will learn about unsupervised techniques for extracting actionable patterns from data. Examples include clustering, collaborative filtering, probabilistic graphical modelling and dimension reduction with applications to customer segmentation, recommender systems, graph and time series mining, and anomaly detection.
Instructor(s): Faculty TBD Terms Offered: TBD
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20810 if BUSN 41204 Machine Learning taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20820. Financial Econometrics. 100 Units.
This course covers a variety of topics in financial econometrics. The topics covered are of real- world, practical interest and are closely linked to material covered in other advance finance courses. Topics covered include ARMA models, volatility models (GARCH), factor models, models for time varying correlations, analysis of panel data, cointegration models for long-run co-movement between prices and models for transactions data and the analysis of transactions cost.
Instructor(s): J. Russell Terms Offered: Autumn
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20820 if BUSN 41203 Financial Econometrics taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

Strategy and the Business Environment Courses

BUSN 20200. Macroeconomics and the Business Environment. 100 Units.
This course is designed to introduce students to classic macroeconomic issues such as economic growth, recessions, unemployment, inflation, interest rates, government deficit, international capital flows, and exchange rates. The course will provide a unified framework to address these issues and to study the impact of different policies, such as monetary and fiscal policies, on the aggregate behavior of the economy. The analytical tools developed in class will be used to understand the recent experience of the United States and of the world economy and to discuss current policy debates.
Terms Offered: TBD
Prerequisite(s): Cannot enroll in BUSN 20200 if BUSN 33050 (or 33040) taken previously.

BUSN 20230. International Financial Policy. 100 Units.
This course will help students develop an understanding of issues in international macroeconomics that are important for investors and managers operating in the global marketplace. It will cover theories of the

determination of exchange rates and interest rates, the management of foreign exchange risk, international capital flows, debt and currency crises, international monetary and exchange rate regimes, the roles of the international financial institutions in developing countries, and other characteristics of international financial markets.
Instructor(s): Faculty TBD Terms Offered: TBD
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20230 if BUSN 33502 International Financial Policy taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20231. Economics in a Globalized World. 100 Units.
International trade has always been economically controversial and politically contentious. This course demystifies some of the complex issues that surround discussions of globalization. It asks such questions as: Why do countries engage in trade? Are countries in competition with one another, making one a winner and another a loser, or is trade mutually beneficial? Who gains and who loses from international trade within a country? Should high-wage countries be worried about competition from low-wage countries? Is international trade the main cause of increasing U.S. wage inequality? How do global supply chains affect firms and workers? How is the burden of import tariffs divided in the economy? Do international trade agreements create jobs or destroy jobs? What is the impact of a trade war on the global economy? This course examines these questions and much more. There are no strict prerequisites, but I assume familiarity with concepts of microeconomics.
Instructor(s): R. Adao Terms Offered: Spring
Prerequisite(s): There are no strict prerequisites, but I assume familiarity with concepts of microeconomics. This course is not open to MBA students. Cannot enroll in BUSN 20231 if BUSN 33501 International Commercial Policy taken previously. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20232. Central Banks, Financial Institutions and the Business Environment. 100 Units.
This course is about money, central banks, and financial institutions. We focus on how they affect businesses, how they help companies grow, and what can go wrong. One focus of the course is monetary policy. We study how modern central banks affect the real economy and how they can be successful. We analyze how central banks use conventional and unconventional monetary policy in crises, using examples from the 2008 financial crisis and the recent inflationary period. We also consider how households and firms react to monetary policy. A second focus is financial crises. We highlight why a well-functioning monetary and financial system is key to a successful economy, and how crises disrupt businesses. To evaluate whether and how the academic concepts matter in the real world, we read and discuss modern empirical research. A third focus is how companies finance themselves and why they choose banks. Key questions are why banks exist and whether banks have a special role in the economy. We cover fundamental economic concepts, including asymmetric information on credit markets and banks' instability due to liquidity transformation. A fourth focus is how central banks regulate the financial sector. We discuss topical questions, such as whether we should stop banks from becoming "too big to fail" and whether banks should receive government bailouts. The regulatory concepts that we discuss affect not only financial institutions, but also businesses and their customers.

BUSN 20900. Competitive Strategy. 100 Units.
The course applies microeconomics (including elements of price theory, game theory, and industrial organization) to analyze decisions firms face in business environments. There will be specific focus on strategic decisions and the factors that influence firms' competitive advantages. Class time will be devoted to lectures and case discussions. Topics covered include sources of competitive advantage, scope of the firm, efficient performance, pricing, entry and exit, vertical structure, and network externalities.
Instructor(s): J. McKinney Terms Offered: Autumn
Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20900 if BUSN 42001 Competitive Strategy taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year college students are restricted from enrolling into this course.

BUSN 20940. Business Ethics. 100 Units.
Students in this course will gain experience formulating coherent arguments about the ethics and role of business, by relating their own views to important ideas about business, democracy and markets. We will use this approach to consider a broad range of tradeoffs and controversies that business leaders often confront. The business environment creates ethical choices that can be hard to think through clearly. It can also subject companies to negative publicity or political pressure, which affects both how they are regulated and how well they attract employees, customers and partners. Business leaders are often called upon to make credible and persuasive arguments defending their products, their firms, their industries, or the capitalist or market system in which they operate. The quality and accuracy of arguments in this environment vary, but usually include assertions that a business or its leaders are behaving unethically or lack legitimacy. The ability to assess these claims, and to address them effectively when you think the facts and arguments are on your side, is a crucial skill, especially given the extensive influence of governments, pressure groups and the media. This course requires students to consider how their views on the role and conduct of business relate to the ideas of important thinkers, and to apply their views to business settings by discussing controversial topics or decisions.
Instructor(s): B. Barry Terms Offered: Spring

Prerequisite(s): Prerequisite(s): This course is not open to MBA students. Cannot enroll in BUSN 20940 if BUSN 33471Business, Politics, and Ethics taken previously, and vice versa. Booth Book Fee may be assessed. Refer to FAQ webpage for registration and schedule details: https://tinyurl.com/y8wz3oge. All first year College students are restricted from enrolling into this course.

Economics Courses

ECON 10000. Principles of Microeconomics. 100 Units.
This course introduces the principles and applications of price theory, which is a fundamental framework to analyze the decision-making of individuals and firms. The course is designed to develop problem-solving skills, both analytically and numerically, for students to be successful in subsequent coursework in the major. Coverage includes consumer theory, producer theory, determinants of demand and supply, market structures, equilibrium and welfare analysis, government intervention, international trade policy, and market failure and externalities. Students may substitute "Econ 20000: The Elements of Economic Analysis I" for this course in the business economics track.
Instructor(s): M. Lee; T. Yehoshua-Sandak, F. Ersoy, M. Brown Terms Offered: Autumn Winter

ECON 10200. Principles of Macroeconomics. 100 Units.
Building on the analytical framework developed in Econ 10000, this course introduces macroeconomic theory and its applications in public policy. Coverage includes measurements, the determination of income, output, unemployment and inflation, long-run economic growth, business cycles, financial market and banking, monetary policy, fiscal policy, international trade and finance, and history of thought. Students may substitute "Econ 20200: The Elements of Economic Analysis III" for this course in the business economics track.
Instructor(s): K. Kuevibulvanich; R. Zhao; O. Galvez-Soriano, T. Yehoshua-Sandak Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010

ECON 10700. Introductory Game Theory. 100 Units.
How should one bid at an auction in order to win at the lowest possible hammer price? How do firms behave when they possess market power but also face competition? Why do companies engage in R&D races in order to release their new products sooner than their competitors? Why do the Republicans and the Democrats almost always ended up choosing moderates as their party nominees in presidential races? To what extent can the veto power of presidents allow them to influence legislative outcomes? To answer these questions, we study Games of Strategies, and explore how lessons learned from such games can guide one's thinking in everyday strategic interactions.
Instructor(s): R. Fang, T. Yehoshua-Sandak, T. Hersey Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770] toward the 42 credits required for graduation.

ECON 11010. Introduction to Statistical Methods in Economics. 100 Units.
This course provides a solid foundation in probability and statistics for economists. We emphasize topics needed for further study of econometrics in ECON 11020.
Instructor(s): M. Ramos Terms Offered: Autumn Spring
Prerequisite(s): ECON 10000/20000/20010 and ECON 10200/20200/20210

ECON 11020. Introduction to Econometrics. 100 Units.
The objective of this course is to introduce students to the practice of econometrics. The course will focus on the use of multiple regression as a tool to establish causal relations. The course emphasizes all steps of the process of empirical research: data collection, analysis, and presentation (both written and oral). Multiple examples of this process will be discussed and students will be expected to read and evaluate existing research. Students will apply the techniques discussed in class to a topic of their choosing. They will write a paper and present results to the class.
Instructor(s): Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010 and ECON 10200/20200/20210; ECON 11010 or ECON 21010 or STAT 22000 or STAT 23400 or STAT 24400

ECON 11300. Correlation or Causation? Applied Causal Reasoning in Economics. 100 Units.
Every day we are surrounded by claims about what causes what: from "minimum wages raise unemployment levels" to "new supplement in the market improves focus and grades." But how do we know which of these claims are true? In a world with abundance of data, the challenge is not finding information, but correctly assessing patterns from the real world. This course gives you the tools to do exactly that. You will learn how economists separate coincidence from real cause-and-effect using modern techniques that power today's most influential research in the field.Throughout the program, you will explore real-world questions, work hands-on with data, and practice methods used to evaluate everything from education policies to health interventions. The course builds toward a collaborative class paper, where you will investigate a causal question and present your findings. By the end of this course, you will have the foundational skills beyond only understanding the difference between correlation and causation - you will know how to test it yourself. These skills will stay with you well beyond the classroom, helping you make sense of the news, analyze studies you encounter online, and succeed in future college-level coursework."

Terms Offered: Summer

ECON 11310. Big Data and Better Decisions. 100 Units.
This course will introduce students to advanced methods for data driven decision making with an emphasis on business applications. Students will learn how to build and interpret models that address two fundamental categories of business questions: (i) causal analysis and (ii) forecasting and prediction. The first portion of the course will cover experimental design, as well as non-experimental causal inference (e.g. matching, fixed effects, differences-in-differences, synthetic control). The second portion of the course will focus on machine learning topics including linear regularization, cross validation, tree models, random forests and boosting. The course will also explore cutting edge methods at the intersection of causal inference and machine learning. Heavy emphasis will be placed on discussion of real examples and business applications of these methodologies. The course work will include writing code and analyzing data in R to learn how these techniques are implemented in practice.
Instructor(s): A. Root Terms Offered: Not offered in 2025-2026
Prerequisite(s): ECON 10000/20000/20010 and ECON 11020/21020/21030

ECON 11600. Experimental Design. 100 Units.
The course equips students with the necessary skills to design and execute experiments effectively. In the first part of the course, students will learn why experiments are conducted and explore different types of experiments along with their respective advantages and disadvantages. Students will gain insights into choosing appropriate incentive structures and appropriate sample sizes. The course addresses critical issues, including internal and external validity, scalability concerns, and the risks of P-hacking and multiple hypothesis testing. Students will also learn about Institutional Review Board procedures. In the second part of the course, students will learn how to measure time preferences, risk preferences, subjective expectations, other-regarding preferences, competitiveness, and discrimination.
Instructor(s): F. Ersoy Terms Offered: Spring
Prerequisite(s): Econ 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 11700. Introduction to Behavioral and Experimental Economics. 100 Units.
This is an introductory course to experimental economics and on how to gather your own data using experimental methods to answer important economic questions. This methodology will be applied to learn the main topics in behavioral economics that leverages psychological insights to decision making and its effects on markets. Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): M. Lee Terms Offered: Not offered in 2025-2026
Prerequisite(s): ECON 10000 or ECON 19800 or ECON 20000 or ECON 20010
Note(s): Students may count either ECON 11700 or ECON 21800, but not both, toward the 42 credits required for graduation.

ECON 11710. The Psychology of Negotiation. 100 Units.
Negotiation is ubiquitous in interpersonal interactions, from making plans for a trip with friends or family, to determining working conditions with an employer, to managing international conflicts. In this course we examine the structure of different negotiations and the psychology that governs the processes and outcomes of a negotiation. For instance, we consider the role of perceptions, expectations, intuitions, and biases. We evaluate the role of information processing, modes of communication, and power in influencing a negotiated outcome. We see how the psychology of trust, reciprocity, fairness, cooperation, and competition can affect our ability to benefit from an exchange or contribute to the escalation of conflict. To better understand the dynamics of the negotiation process, we learn both through engaging in a variety of negotiation role-plays and relating these experiences to research findings. Third- or fourth-year students only. Priority will be given to fourth-year students.
Instructor(s): B. Keysar Terms Offered: Autumn
Equivalent Course(s): PSYC 25700

ECON 11850. Behavioral Economics and Welfare Analysis. 100 Units.
This course studies economic approaches to welfare analysis when people do not choose what is best for themselves. Students will extend standard economic models to accommodate psychological phenomena like overoptimism and inattention, focusing on implications for welfare analysis. They will also learn about modern empirical methods for measuring these phenomena in the real world. The course applies these theoretical and empirical methods to the welfare analysis of several policies, including: the taxation of sugary beverages, bans on so-called "junk fees," and compulsory savings programs (like the U.S. social security system). Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): M. Brown Terms Offered: Autumn Winter
Prerequisite(s): [ECON 10000 or ECON 20000 or ECON 20010] and [ECON 11010 or STAT 22000 or STAT 23400 or STAT 24400]
Note(s): This course may fulfill the microeconomics methods requirement of the business economics specialization.

ECON 12210. Economic History II: The Early Modern World, circa 1300-1800. 100 Units.
This course both describes preindustrial economic life and weighs the models used to explain fundamental changes to it. We will begin by describing some of the basic structures that determined patterns of production, exchange, and consumption in a period of low and easily reversible growth. These include agricultural

productivity, demographic constraints, modes of transportation, and the social structures that governed the distribution of what little surplus premodern societies produced. Turning to the sources of economic dynamism that may have contributed to later industrialization, we will first examine the growth of long-distance trade networks starting in the late fourteenth century. How were traditional economies characterized by limited movement stimulated by the circulation of people, goods, and money from afar? We will then move to a discussion of the factors leading to (or frustrating) transformational patterns of economic growth: agricultural productivity, institutions, "proto-industrial" production in an era of limited urban growth, and changing norms of consumption. This course is part of the College Course Cluster program: Economic History, from Sumer to the Global World.
Instructor(s): P. Cheney and K. Pomeranz Terms Offered: Spring
Equivalent Course(s): HIST 19402

ECON 12410. Pathways in Economics. 100 Units.
This program introduces students to the approaches to economic research and experimentation that make UChicago a world leader in the field. Full-time lecturers in the Department of Economics teach classes on topics in macroeconomics, microeconomics, game theory, and field experiments, which are supplemented by guest lectures delivered by preeminent UChicago faculty in economics and other departments whose research applies the tools and insights of the field in new and exciting ways. Participants can apply what they hear about in lectures during small group discussion sections facilitated by a team of outstanding current UChicago students, as well as in labs and site visits to locations such as the Federal Reserve Bank of Chicago.
Terms Offered: Summer

ECON 12411. Pathways in Economics C. 100 Units.
This program introduces students to the approaches to economic research and experimentation that make UChicago a world leader in the field. Full-time lecturers in the Department of Economics teach classes on topics in macroeconomics, microeconomics, game theory, and field experiments, which are supplemented by guest lectures delivered by preeminent UChicago faculty in economics and other departments whose research applies the tools and insights of the field in new and exciting ways. Participants can apply what they hear about in lectures during small group discussion sections facilitated by a team of outstanding current UChicago students, as well as in labs and site visits to locations such as the Federal Reserve Bank of Chicago.
Terms Offered: Summer

ECON 12412. A Survey of Chicago Economics. 50 Units.
This two-week program will provide an introduction to UChicago-style, rigorous economics education; it is open only to approved visiting third-year students from Universidad Panamericana. Led by a team of full-time lecturers from the Department of Economics, this course will explore topics in four foundational areas: price theory, game theory, experimental economics, and macroeconomics. Participants will also develop skills that will prepare them for further graduate study or other professional pursuits, such as interviewing, networking, and academic and professional communications. Evening and weekend residential program activities will enable students to experience American life and culture and explore the vibrant city of Chicago. Throughout the program, students will have the opportunity to practice both academic and informal spoken English.
Terms Offered: Summer

ECON 12413. A Survey of Chicago Economics and its Business Applications. 000 Units.
This two-week program will provide an introduction to UChicago-style, rigorous economics education, as well as its business applications. Fulltime lecturers in the Department of Economics will explore topics in four foundational areas: price theory, game theory, experimental economics, and macroeconomics. Evening and weekend residential program activities will enable students to experience American life and culture and explore the vibrant city of Chicago. Throughout the program, students will have the opportunity to practice both academic and informal spoken English.
Terms Offered: Summer

ECON 13000. Introduction to Money and Banking. 100 Units.
The course focuses on monetary policy and central bank's attempts to stabilize prices and promote maximum sustainable economic growth. Topics include the structure of the Federal Reserve, the conduct of monetary policy, the term structure of interest rates, risk valuation, management of banking, and financial crises.
Instructor(s): R. Zhao Terms Offered: Spring Winter
Prerequisite(s): Econ 10200/19900/20200/20210
Note(s): Students may not receive credit for both ECON 13000 and ECON 23950.

ECON 13010. Central banking history. 100 Units.
This course canvases topics in the long history of central banking. How does the law construct money? What are the economic mechanics of liquidity provision? and what political role have central banks played in nations and empires? Readings from historians, political scientists, legal scholars, economists, and anthropologists will explore the origins and evolution of central banking from the early modern period to today.
Instructor(s): Nic Johnson
Prerequisite(s): ECON 10200
Equivalent Course(s): HIST 19903, LLSO 25750

ECON 13110. Household Finance: Theory and Applications. 100 Units.
This course will examine the choices households make about important financial decisions and how these individual choices can impact the aggregate economy. Each week, basic predictions from economic theory will be discussed and compared with empirical findings. Topics will include: asset market participation and household portfolio choice; human capital and student loans; housing and mortgages; retirement planning; credit card debt; payday loans; and the gig/sharing economy. Focus will also be placed on government policies affecting these topics, including so-called household financial engineering, the creation of Government Sponsored Enterprises (GSEs) like "Fannie" and "Freddie," and regulatory agencies like the Consumer Financial Protection Bureau (CFPB). The course will provide an introduction to structural modeling for conducting policy counterfactuals. Assessment will be based on problem sets, a midterm and a final. These problem sets will require students to work in R, Stata or other statistical package of the student's choice (with permission of instructor).
Instructor(s): D. Koustas Terms Offered: Spring
Prerequisite(s): Prerequisite(s): PBPL 20000 (PBPL 22200 preferred) or ECON 20000 and one undergraduate course in quantitative research methods (Statistics or Econometrics) or the equivalent or consent of the instructor.
Equivalent Course(s): PBPL 28528

ECON 13210. Introduction to Macroeconomic Models. 100 Units.
This course offers a comprehensive exploration of neoclassical macroeconomic models. The course is divided into five key modules: (i) economic growth and production, (ii) consumption and savings, (iii) business cycles and unemployment, (iv) fiscal policy, and (v) monetary policy and forecasting. Throughout each module, we extensively utilize relevant data to enhance the understanding of theoretical concepts. By the end of the course, students will be able to interpret macroeconomic news and articles and analyze policies through a model-based framework.
Terms Offered: Summer

ECON 13300. Introduction to the Macroeconomics of Monetary and Fiscal Policy. 100 Units.
This course examines monetary and fiscal issues in the macroeconomy. The first part of the course will focus on long-run topics in monetary economics, such as the nature of a monetary economy, inflation, the quantity theory of money, and the welfare cost of inflation. The second part of the course will focus on the macroeconomic implications of government expenditure, supply side economics, the Laffer curve, and the Ricardian equivalence theorem. An effort will be made to tackle these issues within unified and simple dynamic frameworks.
Instructor(s): S. Salas Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010 and Econ 10200/20200/20210

ECON 13310. Introduction to Macroeconomic Analysis: A Data Driven Approach. 100 Units.
This course offers a comprehensive exploration of neoclassical macroeconomic models, designed for students who have previously studied the principles of macroeconomics. The course is divided into five key modules: (i) economic growth and production, (ii) consumption and savings, (iii) government finances, (iv) money and the price level, and (v) unemployment. Throughout each module, we extensively utilize relevant data to enhance the understanding of theoretical concepts. By the end of the course, students will not only possess the ability to interpret macroeconomic news and articles but also analyze policies through a model-based framework.
Instructor(s): O. Galvez-Soriano Terms Offered: Autumn Spring
Prerequisite(s): Econ 10200/20200/20210 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 14000. Introduction to Labor Economics. 100 Units.
This course is an introduction to labor economics with an emphasis on applied microeconomic theory and empirical analysis. Topics to be covered include: labor supply and demand, taxes and transfers, minimum wages, immigration, human capital, creativity over the lifecycle and unemployment. For each topic we will describe the basic economic framework used in the analysis, analyze associated cases of study and drawn conclusions about what we have learned. Most of the examples will be taken from U.S. labor data and special attention will be given to randomized trials and experimental methods to infer causality.
Terms Offered: Winter
Prerequisite(s): ECON 10000/20000/20010

ECON 14020. Labor Markets: a Global Perspective. 100 Units.
In this course we will explore standard models that form the core of labor economics including labor supply, labor demand, job search models, wage setting, discrimination, and migration. For each topic we will then examine empirical applications of these models with a focus on middle and low-income countries. We will discuss how these traditional models are useful, or not, in understanding labor market outcomes in these settings and how they can be expanded to better capture relevant features of labor markets outside high-income countries.
Instructor(s): Lane, G Vellekoop, N Terms Offered: Winter
Equivalent Course(s): PPHA 44302, PBPL 25640

ECON 14030. The Workplace and Family Policy. 100 Units.
The topics covered in the course will include: the demographic transition, human capital accumulation, gender wage and employment gaps, discrimination in the workplace, family leave and childcare policies, tax policies including subsidies like the Earned Income Tax Credit (ETIC), and related welfare policies. We will draw on the theory of static and dynamic labor supply, theories of labor demand, and labor market equilibrium to guide its investigation, and use empirical tools to answer research questions. For each topic covered in this course, I

will introduce an elementary treatment of the canonical theoretical model and give examples of its empirical application. In studiying empirical applications, we will often draw on analysis from international experience.
Equivalent Course(s): PBPL 25695, GNSE 25695

ECON 14050. Introduction to Labor Economics and the Firms. 100 Units.
This course will focus on the most important topics in labor economics such as the determination of levels of employment and wages, compensating wage differentials, human capital, migration, and discrimination. Moreover, the course will investigate the decision-making process of both workers and firms and their impact on the wage distribution
Instructor(s): Ramos, M. Terms Offered: Spring
Prerequisite(s): Econ 10000 or Econ 20000 or Econ 20010

ECON 14810. Evolution and Economics of Human Behavior. 100 Units.
This course explores how evolutionary biology and behavioral economics explain many different aspects of human behavior. Specific topics include evolutionary theory, natural and sexual selection, game theory, cost-benefit analyses of behavior from an evolutionary and a behavioral economics perspective, aggression, power and dominance, cooperation and competition, biological markets, parental investment, life history and risk-taking, love and mating, physical attractiveness and the market, emotion and motivation, sex and consumer behavior, cognitive biases in decision-making, and personality and psychopathology.
Instructor(s): D. Maestripieri Terms Offered: Autumn
Note(s): CHDV Distribution: Undergraduate subject area: A, Graduate distribution: 1
Equivalent Course(s): CHDV 27950, CHDV 37950, PSYC 37950, PSYC 27950

ECON 15010. Investments: From Economics to Finance. 100 Units.
This course studies finance and investments through the lens of economic equilibrium methods. We look at how the general equilibrium framework in economics gives rise to the factor pricing models in finance, the no-arbitrage framework in economics gives rise to the option pricing models in finance, and the Nash equilibrium framework in economics gives rise to the microstructure trading models in finance. Trillions of dollar worth of financial products ride on these financial models, and we trace the path from the basic models of equilibrium in economic theory to these applied models in finance that have found immense use in practice. The course combines a theoretical framework with applied analysis. Topics covered include: basics of general equilibrium with uncertainty, mean-variance utility, portfolio optimization, capital asset pricing model, no-arbitrage equilibrium, fundamental theorem of asset pricing, binomial option pricing, Black-Scholes-Merton options theory, Bayes Nash equilibrium, Kyle and Glosten-Milgrom models of trading.
Instructor(s): A. Bhattacharya Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/STAT 23400/ECON 11010.

ECON 15020. Trading: From Game Theory to Finance. 100 Units.
This course studies trading in financial markets through the lens of game theory and asymmetric information. Trading models are at the heart of financial markets, and we trace the path from basic models in game theory and equilibrium economics to applied trading models in finance that have found immense use in practice. We look at how the asymmetric information framework gives rise to market microstructure trading, equilibrium tatonnement process gives rise to arbitrage trading, general equilibrium framework gives rise to beta-based trading, model uncertainty gives rise to alpha-based trading, and event uncertainty gives rise to option trading. The course combines a theoretical framework with applied analysis. Topics covered include: information structures, Bayesian probability, Blackwell's theorem, basics of rational expectations equilibrium, Bayes Nash equilibrium, limit order books, bid-ask spread formation, asymmetric information models of microstructure trading, PIN model, capital asset pricing model, beta and index fund trading, alpha and hedge fund trading, speculative trading with options, high-frequency trading, arbitrage and behavioral trading models.
Instructor(s): A. Bhattacharya Terms Offered: Spring
Prerequisite(s): Econ 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 15030. Basics of Corporate, Banking and Investment Finance. 100 Units.
This course introduces the basics of corporate finance, investments, and banking, with an emphasis on real-world applications. The aim is to prepare students for a career in financial economics and allied industries including banking, investment management, and capital markets. We shall discuss capital structure, corporate valuation, financial statement analysis, cost of capital, interest rates, yield curve analysis, monetary policy impact, risk and return analysis, portfolio theory, capital asset pricing model and financial instruments. The course is a rigorous introduction to various facets of financial economics that a practitioner in the field handles, and it serves as a gateway to the more advanced courses on these topics. The course includes Friday lab sessions that will include a case study, discussions with industry alumni, and preparation for upcoming recruiting cycles.
Terms Offered: Summer
Prerequisite(s): Econ 10000/20000/20010 and Econ 10200/20200/20210 and Econ 11010/STAT 22000/STAT 23400/ STAT 24400

ECON 15500. Introduction to Development Economics. 100 Units.
The course explores one of the most pressing global challenges: poverty. Through a microeconomic and empirical lens, students learn to analyze the economic lives of the poor, examining why poverty persists, and which interventions have been effective to sustainably improve the lives of poor people in low- and middle-income countries (LMIC). The course employs economic theory and econometric methods to analyze consumption,

health, education, access to credit, entrepreneurship, and migration. The course places the microeconomic issues in the context of the macroeconomic context of economic institutions, e.g., security of property rights, and political institutions, e.g., electoral empowerment. Using both historical perspectives and contemporary studies, students learn about the frontier of knowledge at the frontier of development economics, emphasizing empirical research and data analysis. The course prioritizes close reading of accessible articles from top economics journals and includes data analysis interpretation exercises. Class discussions apply the frontier state of knowledge to real-world cases to prepare students for further study and careers in policy and economic development.
Instructor(s): S. Vasudevan Terms Offered: Winter
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 16000. Elements of Human Capital Theory: The Economic Science of People. 100 Units.
Many believe economics is a discipline mostly concerned with money, finance, taxes, international trade, and industrial policy. This course explores how economics is, above all, about people. It covers a wide range of topics, all seen through the lens of human capital theory to demonstrate its importance in the economy: parental investment in children, nature versus nurture, aging, education, health, marriage, fertility, preference formation, specialization, and economic growth. In addition to discussing economic theory, students will gather and analyze data, consider applicable examples in literature, movies, sports, or popular culture, and write short essays. No prior knowledge of calculus, economic theory, or econometrics is required.
Terms Offered: Summer

ECON 16040. Introduction to Human Capital. 100 Units.
This course introduces the concept of human capital, its accumulation process, its role in family decisions, and its impact on the economy. The insights of several models are explained and discussed, covering a wide range of topics, including parental altruism, education, bequests, health, fertility, support in old age, income inequality, intergenerational transmission of wealth, specialization, division of labor, and economic growth. The theory is complemented with historical evidence from different countries and periods.
Instructor(s): P. Pena Terms Offered: Spring
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/STAT 23400/STAT 24400/ECON 11010

ECON 16050. Why aren't humans replacing themselves? What are the consequences? 100 Units.
The human fertility rate has fallen in half in the last 50 years, and is below replacement in more and more countries. These declines imply that the human population on Earth will peak at roughly 12 billion around 2075. Will the human population stabilize or collapse after it peaks? Will human civilization survive? This course will examine this Big Question in depth. We will first review the data demonstrating the decline in total fertility rate in countries around the world, then consider the multitude of explanations that have been proposed for this decline. Next, we will explore the consequences for human well-being and civilization of population decline. Finally, we will investigate potential solutions to the problem, with an eye to the underlying causes of fertility decline. Students from a wide variety of fields are welcome, including those with knowledge of partial differential equations, data analysis, or programming skills, but no prior experience in demography or related areas. Students will write a final paper that examines a particular cause of fertility decline and critically evaluates it, providing the best evidence for and against it. This course is cross-listed with the McKeon Center in the UChicago College.
Instructor(s): Dorian Abbot, Anup Malani Terms Offered: May be offered 2026-2027
Prerequisite(s): PQ: Third or fourth-year standing.
Equivalent Course(s): BPRO 27450

ECON 16520. Economics and Environmental Policy. 100 Units.
This course combines basic microeconomic theory and tools with contemporary environmental and resources issues and controversies to examine and analyze public policy decisions. Theoretical points include externalities, public goods, common-property resources, valuing resources, benefit/cost analysis, and risk assessment. Topics include pollution, global climate change, energy use and conservation, recycling and waste management, endangered species and biodiversity, nonrenewable resources, congestion, economic growth and the environment, and equity impacts of public policies.
Instructor(s): S. Shaikh Terms Offered: Autumn
Prerequisite(s): ECON 10000 or higher, or PBPL 20000
Note(s): Not offered in Autumn of the 2020-21 academic year.
Equivalent Course(s): CEGU 21800, PBPL 21800

ECON 16550. The Climate and Growth Challenge. 100 Units.
The global energy and climate challenge is perhaps the most important problem society faces. It requires identifying approaches to ensure people have access to the inexpensive and reliable energy critical for human development, without causing disruptive climate change or unduly compromising health and the environment. The course pairs technical and economic analysis to develop an understanding of policy challenges in this area. Lecture topics will include the past, present, and future of energy supply and demand, global climate change, air pollution and its health consequences, selected energy technologies such as solar photovoltaics, nuclear power, unconventional oil and gas, and an analysis of theoretical and practical policy solutions in developed and emerging economies.
Instructor(s): Michael Greenstone Terms Offered: Spring

Prerequisite(s): BPRO 22510: third or fourth-year status. CEGU 22510, CCSG 19000, ECON 16550, PBPL 22510: First-year student by permission of instructor only.
Equivalent Course(s): BPRO 22510, CEGU 22510, PBPL 22510, CCSG 19000

ECON 16560. Consumers, Firms, and the Environment. 100 Units.
This course applies microeconomic analysis to energy markets and environmental problems like climate change. Using theory and data, we examine how consumers and firms make decisions about pollution, energy use, and clean technology adoption. We also study how government policies like taxes, regulations, and subsidies shape these decisions. Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): Brown, M. Terms Offered: Spring
Prerequisite(s): ECON 10000 or ECON 20000 or ECON 20010) and (STAT 22000 or STAT 23400 or STAT 24400 or ECON 11010).

ECON 16700. Introduction to Economics of Education. 100 Units.
This course investigates economic issues related to education. We will first discuss the theory behind the decision to invest in education. We will talk about private and social returns to education as well as signaling value of education. Then, we will investigate which factors (class size, teachers, incentives, peers, beliefs, etc.) matter in determining the success of students. Throughout the course, we will learn how different methods (experiments, difference-in-differences, instrumental variables, and regression discontinuity) are used to answer the economics of education questions.
Instructor(s): F. Ersoy Terms Offered: Winter
Prerequisite(s): ECON 10000/20000/20010 and ECON 11010/STAT 22000/STAT 23400/STAT 24400

ECON 16710. Education and Economic Development. 100 Units.
This course covers policy issues related to education in developing contexts. We will analyze education policies and reforms, develop skills to be a critical consumer of relevant research on each topic, and examine implications of the findings to policy and practice. Topics include discrimination and inclusion in education, understanding factors that influence educational decisions, provision of basic needs in schools, teacher pay and incentives, education in emergency settings, and school choice.
Instructor(s): A. Adukia Terms Offered: Winter
Prerequisite(s): Recommended prerequisite courses: Microeconomics and econometrics. Students in their last years will be given priority.
Equivalent Course(s): PBPL 28350, EDSO 28350

ECON 16950. Conflict: Root Causes, Consequences and Solutions for the Future. 100 Units.
The goals of this course are to introduce you to key concepts in the study of conflict, and to help you develop the analytical skills you need to understand and assess key arguments advanced in this arena. Drawing primarily on economics and political science, as well as psychology, we will seek to understand: Why do human beings engage in acts of violence? How can armed groups compel atrocities? How do we prevent cycles of violence, and aid countries recovering from war? Specifically: We will examine the role of economic shocks and ethnic divisions on civil war. We will also discern whether similar factors explain the rise of terrorism. In addition, we will study the consequences of conflict on socio-economic development, and examine the role of foreign aid and post-conflict reconciliation in helping countries recover from conflict. The class will examine these questions while focusing on analytical skills needed to understand cutting edge research in this area. Thus a major emphasis of the course is on learning how to think critically about empirical evidence, and learning the methods used in quantitative empirical analysis, such as fixed effects models, differences-in-differences research designs, and instrumental variables estimation. It is ideal for students who want to learn substantively about conflict while developing an understanding of the methodology used to produce key empirical findings.
Instructor(s): Oeindrila Dube Terms Offered: Winter
Note(s): Note: While the course sets out to teach these skills, you do not need previous coursework in statistics.
Equivalent Course(s): PBPL 28750, PLSC 28750

ECON 17100. Introduction to International Trade. 100 Units.
This course covers international economics with an emphasis on international trade. The basic theories of international trade are introduced and used to analyze welfare and distributional effects of international trade, government policies, and technology diffusion. In addition, this course also discusses the main empirical patterns of international trade and international investment.
Instructor(s): Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): ECON 10000/19800/20000/20010 and ECON 10200/19900/20200/20210

ECON 17700. Introduction to Health Economics. 100 Units.
This course will introduce students to the economics of health care provision and payment. We will use methods from microeconomics to investigate how different aspects of the health care system function and to assess the implications for different policies designed to improve that functioning. We will use economic tools and techniques from the sub-disciplines of information economics, industrial organization, labor economics, public economics, behavioral economics, and decision theory to think about these questions. The primary goals of the course will be to (i) master different economic techniques in the context of health care markets and (ii) learn about the specific institutional details and policies relevant to those markets.
Instructor(s): Root, A. Terms Offered: Spring

Prerequisite(s): ECON 10000/20000/20010 and ECON 11010/STAT 22000/STAT 23400/STAT 24400

ECON 17720. Evidence in Health Policy. 100 Units.
In this course, we will consider the role of evidence and empirical studies in helping inform us about important health policy topics, such as the consequences of expanding the Medicaid program, the effects of private equity acquisitions of medical facilities, and the burden of medical debt. The course will be divided into two-lecture modules where, in the first, we will read an editorial or descriptive piece that helps introduce a health policy context, and, in the second, we will read a study that confronts the topic using modern empirical methods. In class, we will learn both about health policy and how to read and understand evidence in support or opposition of those policies. Out of class activities will including synthesizing studies to inform a prospective policy proposal and reanalyzing prior studies using actual data and statistical programming. This course was previously named Issues in Health Policy.
Instructor(s): Brot, Z Terms Offered: Winter
Equivalent Course(s): PPHA 38050, PBPL 25510

ECON 18010. Introduction to Managerial Microeconomics. 100 Units.
This course presents several classic microeconomic models applicable in business contexts. The topics covered include self-selection, commitment, product differentiation, matching, and mechanism design, among others. The theoretical insights of each model are analyzed. Real-world applicability is discussed using practical examples. Students are required to write short papers applying the models presented in the course to real-world situations in the context of business.
Instructor(s): P. Pena Terms Offered: Autumn
Prerequisite(s): ECON 10000 or ECON 19800 or ECON 20000 or ECON 20010

ECON 18020. Introduction to Applied Empirical Industrial Organization. 100 Units.
In this course, students will learn how to apply techniques and models developed in industrial organization and law and economics to important questions that arise in litigation and government regulation. We will be guided and informed by pure theory underlying industrial organization and implement it in a world of partial information, incomplete data, and even contradictory data, among other complexities. Students will learn how to develop inferences by applying the models to real world cases and data - ie, extracting the most information possible from partial, imperfect data, frequently with missing values or poorly-measured data points. These fact patterns will not always result in an incontrovertible answer. Thus, students will be expected to identify and express the "best argument for" and "best argument against" the questions posed to them. This means that students will be expected to (i) use theory as a guideline to assess the relevant facts, circumstances, and data, (ii) reach a view, (iii) succinctly express that view in writing and acknowledge and address contrary theory and empirical results. Students will also see actual expert reports and/or white papers that have been prepared in actual disputes and investigations. Part of the grade will be based on an "expert report" written by the students in small teams.
Terms Offered: TBD
Prerequisite(s): Econ 10000/20000 and Econ 11020/21020
Note(s): Business Economics specialization students should register for Econ 18020.

ECON 18650. Law and Economics of Business Law. 100 Units.
This course will introduce students to the economic analysis of business law. Students will be introduced to basic concepts of private law, including contracts, property, and remedies. They will then learn the basic tools of law and economics. With those skills they will explore the law of for-profit businesses, including corporate governance, mergers and acquisitions, and corporate bankruptcy. Students may use this course to satisfy the microeconomics method requirement for the business economics specialization.
Instructor(s): Casey, A. Terms Offered: Spring
Prerequisite(s): Econ 10000 or Econ 20000 or Econ 20010

ECON 19000. Economics for Everyone: Micro. 100 Units.
The field of economics has generated a powerful set of insights which have fundamentally shaped the modern world. Because modern economics puts such a heavy stress on mathematical rigor, the most interesting economic ideas often get pushed to the background. In this course, we will explore these big economic ideas, without the math. Our goal is to make the beauty and power of economic thinking available to everyone. We will discuss what it means to think like an economist, how you can use economic thinking to make the world a better place (or to take advantage of your friends and enemies, if you prefer), and also how sometimes thinking like an economist can get you into trouble.
Instructor(s): J. List, S. Levitt Terms Offered: TBD
Note(s): This course will now count as an ECON elective for the business economics specialization.

ECON 19100. Economics for Everyone: Macro. 100 Units.
This course explores the big ideas in macroeconomics in a way that is enjoyable and accessible, with minimal reliance on mathematics. The goal is to provide an introduction to macroeconomic issues for people who have never before studied macroeconomics (and who might never study it again), so that they can understand and contribute to ongoing discussions in the news and on social media. We will demystify some of the major macroeconomic questions of our times: Why is there unemployment? Why are some countries poor? What's the big deal about government debt? How high should we set taxes? What gives money and stocks their value? What

does the Fed do? And why did all those economists win Nobel Prizes? We will show the fun, interesting, and strange sides of macroeconomics.
Instructor(s): G. Kaplan and R. Shimer Terms Offered: Winter
Note(s): Beginning in 2025, ECON 19100 may count as an ECON elective for the business economics specialization.

ECON 19200. Introduction to Issues and Methods in Microeconomics. 100 Units.
Microeconomics is the study of how agents make optimal choices when facing constraints. The course will start by developing the "Economic Approach" as the basic tool for analysis in economics. We will continue with a model of causal inference, and link it with concepts students have learned in the econometrics course. Then, we introduce the use of experiments as an alternative methodology for the researchers to gather their own data. Finally, we cover some major topics in behavioral economics.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 10000/20000/20010.
Note(s): Study Abroad

ECON 19300. Introduction to Issues and Methods in Macroeconomics. 100 Units.
We will develop basic tools and methods in economics and study issues in macroeconomics and international trade and finance. The topics we cover include both contemporary and classical issues such as tax incidence and distortions, optimal taxation, inflation, monetary policy, patterns and benefits of trade, and exchange rate determination. The objective of the course is to train students with analytical tools in macroeconomics so that they can understand, analyze, and evaluate various policies and policy proposals. To make the subject matters relevant and practical, students are strongly encouraged to read the Wall Street Journal and the Economist regularly to keep up with current events and controversies.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 10200/20200/20210
Note(s): Study Abroad

ECON 19500. Practice of Risk Management and Investing. 100 Units.
Principles and practices for financial decision-making under uncertainty. This course provides a foundational understanding of investment strategies and risk management. It is designed to give a perspective on the complexities surrounding financial decision making amidst uncertain market conditions. Students will learn about different types of risks that impact investments, and best practices for risk management under a range of real market conditions, always under the foundations of a robust theoretical framework. We will draw insights from real market events that have significantly influenced the investment landscape, such as the financial crisis of 2008-2009, the pandemic of 2020 and other ruptures that impacted markets in the past. Once familiarized with concepts in investing such as portfolio response to risks, yield curves, credit risk, tail and normal risks, and portfolio diversification, the class will be divided in teams to "play" a portfolio challenge game. Teams will manage a portfolio of bonds and navigate it as market conditions are perceived to change, protect the portfolio against market downturns and produce the best possible return at the end of the market cycle. The market conditions in this game are real, and we will be able to, together, appreciate the difficulties in forecasting the future of markets and manage investment risks under real uncertainties.
Instructor(s): Staff Terms Offered: Spring
Prerequisite(s): (ECON 10000/20000/20010) and (STAT 22000/STAT 23400/STAT 24400/STAT 24410/ECON 11010) and (ECON 11020 or ECON 21020 or ECON 15010 or ECON 15020)

ECON 20000-20100-20200-20300. The Elements of Economic Analysis I-II-III-IV.

ECON 20000. The Elements of Economic Analysis I. 100 Units.
This course develops the economic theory of consumer choice. This theory characterizes optimal choices for consumers given their incomes and preferences, as well as the relative prices of different goods. This course develops tools for analyzing how these optimal choices change when relative prices and consumer incomes change. Finally, this course presents several measures of consumer welfare. Students learn how to evaluate the impact of taxes and subsidies using these measures. Completion of ECON 10000 is strongly recommended of students without a prior microeconomics course.
Terms Offered: Autumn Spring
Prerequisite(s): MATH 13300 (with prior completion of or at least concurrent with MATH 15250), MATH 15200, MATH 16300, MATH 15250, MATH 15910, MATH 18300, MATH 18400, MATH 20300, MATH 20310, or MATH 20700. First year students may enroll in Econ 20000 concurrently with Math 16300/16310 if they have received an A/A- in both Math 16100/16110 and Math 16200/16210.
Note(s): Students who matriculated prior to 2022-2023 and have completed MATH 15100-15200-15300 may replace the MATH 19520 requirement with MATH 15250. They may take MATH 15250 prior to or concurrently with ECON 20000/20010.

ECON 20100. The Elements of Economic Analysis II. 100 Units.
This course is a continuation of ECON 20000. The first part of this course discusses markets with one or a few suppliers. The second part focuses on demand and supply for factors of production and the distribution of income in the economy. This course also includes some elementary general equilibrium theory and welfare economics.
Instructor(s): Staff Terms Offered: Autumn Winter

Prerequisite(s): ECON 20000 or 20010

ECON 20200. The Elements of Economic Analysis III. 100 Units.
As an introduction to macroeconomic theory and policy, this course covers the determination of aggregate demand (i.e., consumption, investment, the demand for money); aggregate supply; and the interaction between aggregate demand and supply. We also discuss economic growth, business cycle, inflation and money. Completion of ECON 19900 is strongly recommended of students without a prior macroeconomics course.
Instructor(s): Staff Terms Offered: Spring Winter
Prerequisite(s): ECON 20100 or 20110

ECON 20300. Elements of Economic Analysis IV. 100 Units.
This is a course in money and banking, monetary theories, the determinants of the supply and demand for money, the operation of the banking system, monetary policies, financial markets, and portfolio choice.
Instructor(s): Staff
Prerequisite(s): ECON 20200 or 20210

ECON 20010-20110-20210. The Elements of Economic Analysis: Honors I-II-III.
The Elements of Economic Analysis: Honors I-II-III

ECON 20010. The Elements of Economic Analysis I Honors. 100 Units.
The scope of the honors section is the same as the standard section, but it covers material at greater depth and using more sophisticated mathematical methods. This course develops the economic theory of consumer choice. This theory characterizes optimal choices for consumers given their incomes and preferences, as well as the relative prices of different goods. This course develops tools for analyzing how these optimal choices change when relative prices and consumer incomes change. Finally, this course presents several measures of consumer welfare. Students learn how to evaluate the impact of taxes and subsidies using these measures. Completion of ECON 10000 (or ECON 19800) is strongly recommended of students without a prior microeconomics course.
Instructor(s): V. Lima Terms Offered: Autumn
Prerequisite(s): MATH 13300 (with prior completion of or at least concurrent with MATH 15250), MATH 15200, MATH 16300, MATH 15250, MATH 15910, MATH 18300, MATH 18400, MATH 20300, MATH 20310, or MATH 20700. First year students may enroll in Econ 20000 concurrently with Math 16300/16310 if they have received an A/A- in both Math 16100/16110 and Math 16200/16210.
Note(s): Students who matriculated prior to 2022-2023 and have completed MATH 15100-15200-15300 may replace the MATH 19520 requirement with MATH 15250. They may take MATH 15250 prior to or concurrently with ECON 20000/20010.

ECON 20110. The Elements of Economic Analysis II Honors. 100 Units.
The scope of the honors section is the same as the standard section, but it covers material at greater depth and using more sophisticated mathematical methods. This course is a continuation of ECON 20000/20010. The first part of this course discusses markets with one or a few suppliers. The second part focuses on demand and supply for factors of production and the distribution of income in the economy. This course also includes some elementary general equilibrium theory of welfare economics.
Instructor(s): R. Fang Terms Offered: Winter
Prerequisite(s): ECON 20000 or 20010

ECON 20210. The Elements of Economic Analysis III Honors. 100 Units.
The scope of the honors section is the same as the standard section, but it covers material at greater depth and using more sophisticated mathematical methods. As an introduction to macroeconomic theory and policy, this course covers the determination of aggregate demand (i.e., consumption, investment, the demand for money); aggregate supply; and the interaction between aggregate demand and supply. We also discuss economic growth, business cycle, inflation and money. Completion of ECON 10200 (or ECON 19900) is strongly recommended of students without a prior macroeconomics course.
Instructor(s): K. Yoshida Terms Offered: Spring
Prerequisite(s): ECON 20100 or 20110

ECON 20520. Formal Models of Political Economics. 100 Units.
Why do the Republicans and the Democrats almost always ended up choosing moderates as their party nominees in presidential races? How do "checks and balances" such as a legislative committee's power to set the agenda or a president's power to veto a bill affect policy outcomes? What leads to coalition building in a legislature and how does it affect the result of legislative bargaining? When can a legislature optimally delegate its power to a bureaucratic agency who has its own interests and agenda? To answer questions like these, we study formal models of political economics. Such models examine explicitly the incentives of participants in political processes and generate predictions of their behavior based on such incentives and any confounding strategic considerations. Our approach is largely game theoretical. Familiarity with fundamental game theoretical ideas like the strategic and extensive games, the Nash Equilibrium, and the Subgame Perfect Equilibrium is essential and assumed.
Instructor(s): R. Fang Terms Offered: Autumn
Prerequisite(s): ECON 10700 or ECON 20100 or ECON 20110 or ECON 20700

Note(s): Students may count either ECON 20510 or ECON 20520, but not both, toward the 42 credits required for graduation.

ECON 20700. Game Theory and Economic Applications. 100 Units.
This course introduces the basic ideas and applications of game theory. Topics include models of games in extensive and strategic form, equilibria with randomization, signaling and beliefs, reputation in repeated games, bargaining games, investment hold-up problems, and mediation and incentive constraints.
Instructor(s): R. Fang Terms Offered: Spring
Prerequisite(s): ECON 20100/20110
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770/ECMA 30770] toward the 42 credits required for graduation.

ECON 20770. Decision and Strategy. 100 Units.
This course provides a formal introduction to game theory with applications in economics. We will study models of how individuals make decisions, and how those decisions are shaped by strategic concerns and uncertainty about the world. The topics will include the theory of individual choice, games of complete and incomplete information, and equilibrium concepts such as Nash equilibrium. The applications will include oligopoly, auctions, and bargaining. The course is appropriate for advanced undergraduates who are interested in a rigorous mathematical approach to understanding human behavior.
Instructor(s): B. Brooks Terms Offered: TBD
Prerequisite(s): Prerequsites for Undergraduates: ECON 20100/ECON 20110 and MATH 20300/MATH 20310/ MATH 20700, or consent of instructor
Note(s): Student may count only one of [ECON 10700 or ECON 20700 or ECON 20770/ECMA 30770] toward the 42 credits required for graduation.
Equivalent Course(s): ECMA 30770

ECON 20780. Decision and Strategy II. 100 Units.
We continue the formal introduction to decision theory and game theory begun in ECMA 30780, with a specific focus on models of incomplete information. Topics covered include subjective expected utility, Bayesian games, contract theory, and mechanism design. Among the applications we will consider are auctions, collusion, entry deterrence, and strategic communication. The course is appropriate for advanced undergraduates who are interested in a rigorous mathematical approach to decision making in strategic situations.
Instructor(s): B. Brooks Terms Offered: TBD
Prerequisite(s): ECON 20770/ECMA 30770 or consent of instructor
Equivalent Course(s): ECMA 30780

ECON 21020. Econometrics. 100 Units.
Required of students who are majoring in economics; those students are encouraged to meet this requirement by the end of their third year. This course covers the single and multiple linear regression model, the associated distribution theory, and testing procedures; corrections for heteroskedasticity, autocorrelation, and simultaneous equations; and other extensions as time permits. Students also apply the techniques to a variety of data sets using PCs.
Instructor(s): Staff Terms Offered: Autumn Spring Winter
Prerequisite(s): [Econ 20100 or Econ 20110] and [Math 19620 or Math 18500 or Math 20000 or Math 20250 or Math 20700 or Stat 24300] and [Stat 23400 or Stat 24400 or Stat 24410]

ECON 21030. Econometrics - Honors. 100 Units.
The topics are essentially the same as those covered in ECON 21020, but this foundations course in econometrics gives a more systematic introduction to the application of statistical theory to economic applications. This course is intended for students who are planning to study economics at the graduate level.
Instructor(s): J. Hardwick Terms Offered: Spring Winter
Prerequisite(s): ECON 20100/20110, and STAT 24400/24410/24500, and MATH 19620/20250/STAT 24300; or consent of instructor

ECON 21031. Econometrics II-Honors. 100 Units.
This course is a continuation of ECON 21030. The topics covered include additional applications of linear regression to descriptive and causal inference. Other topics may include nonlinear models, panel data, quantile regression, time series, the bootstrap, and nonparametric regression. This course is intended for students who are planning to study economics at the graduate level.
Instructor(s): A. Torgovitsky Terms Offered: Spring
Prerequisite(s): ECON 21020/21030

ECON 21110. Applied Microeconometrics. 100 Units.
This course will cover a broad set of applications in labor economics, public economics, industrial organization, economics of education, environmental economics, and development economics. There will be a strong focus on how economic theory, institutional details, and experiments can be used to draw causal inferences on economic relationships. There will be emphasis on applying a number of commonly used microeconometric methods to economic data; including the linear regression model, fixed and random effects models, instrumental variables, and discrete choice models. When interpreting the empirical results, we will also discuss the importance of omitted variables bias and measurement error.

Instructor(s): J. Joensen Terms Offered: Winter
Prerequisite(s): ECON 21020 or ECON 21030

ECON 21160. Topics in Causal Inference. 100 Units.
This course covers selected topics on causal inference and econometrics. Special attention will be given to the use of economic models in causal inference. This course is intended for students who are planning to study economics at the graduate level.
Instructor(s): M. Mogstad, A. Torgovitsky
Prerequisite(s): ECON 21030 (or ECON 21020 with instructor consent)

ECON 21200. Time Series Econometrics. 100 Units.
This course focuses on theory, and covers a broad range of topics, both mathematical and statistical, on stationary time series models in time and frequency domains. The models include ARMA, VAR, ARCH/GARCH and their variants. It also covers nonstationary time series models with unit roots and cointegration, and the theories and methodologies to estimate and test them statistically.
Instructor(s): Staff Terms Offered: TBD
Prerequisite(s): ECON 20200/20210 and ECON 21020/21030

ECON 21315. Econometric Applications I. 100 Units.
Course one of a two-quarter sequence designed to guide students through the steps of writing a research paper that applies econometric methods to study an economic question of interest. In the course, we will review and supplement our understanding of econometric methods that are frequently used in applied work, along with readings and in-class discussions of research papers to illustrate how applied research is conducted and presented. Along with homework assignments and required readings, during the first quarter, students will identify a topic of interest, locate data sources, review relevant literature, and make a presentation of their research proposal.
Instructor(s): A. Hortacsu Terms Offered: Winter
Prerequisite(s): ECON 21030 or consent of instructor
Note(s): Note: Students who have taken ECON 21320 or ECMA 31320 may not enroll in ECON 21315. ECON 21315 may count as a data science course for the economics data science specialization.

ECON 21316. Econometric Applications II. 100 Units.
This course is a continuation of ECON 21315. Students will refine and execute their proposal (from ECON 21315), resulting in a final presentation and a final paper that will undergo peer review.
Instructor(s): A. Hortacsu Terms Offered: Spring
Prerequisite(s): ECON 21315 or consent of instructor (if they have taken ECMA 31320)
Equivalent Course(s): ECMA 31316

ECON 21410. Computational Methods in Economics. 100 Units.
This course introduces the empirical and computational techniques necessary for numerical estimation and simulation in economics. Through examples in economics, the course covers topics such as optimization, function approximation, and monte carlo techniques. Emphasis will be placed on developing effective programming and research practices. The course is structured through a series of applications in such topics as segregation, occupational choice, and repeated games. The course will be taught in R and STATA. Though helpful, no previous experience with R or STATA is required.
Instructor(s): Staff Terms Offered: TBD
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 21730. Applied Behavioral Economics. 100 Units.
This class covers recent work in behavioral economics. Topics include discrimination, social pressure, social norms, identity and gender. Applications will cover a wide range of fields, including labor economics, finance, and political economy.
Instructor(s): L. Bursztyn
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 21740. Behavioral Economics and Experiments. 100 Units.
This is a hands-on course in behavioral economics. Basic concepts of preferences, traits, and behavioral biases are reviewed that link economics and psychology. Methods for eliciting traits and preferences will be taught and implemented in actual lab experiments. Grade will be determined by reports and quality of lab work.
Instructor(s): J. Heckman Terms Offered: TBD
Prerequisite(s): ECON 10000/19800/20000/20010 AND STAT 22000/23400/24300/24400/24410/ECON 21010 (Lab students require one economics course.)

ECON 21800. Experimental Economics. 100 Units.
This course provides the necessary tools to be an avid consumer of the experimental literature and instructs students on how to become a producer of that literature. Topics include a summary of recent experimental findings and details on how to gather and analyze data using experimental methods.
Instructor(s): J. List
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030; ECON 10000/20000 and ECON 11020 for declared business economics students. No first-year students.

Note(s): Students may count either ECON 11700 or ECON 21800, but not both, toward the 42 credits required for graduation.

ECON 22030. The Chinese Economy,Chinese Economy. 100 Units.
This course provides an overview of the Chinese economy, with two main focuses. First, we will review the significant reforms that happened in China in the past four decades, which fundamentally reshaped the modern China as we see today. Second, we will discuss some of China's key political and economic institutions, and their implications on China and the rest of the world. Throughout the course, special emphasis will be given to the role of the state in China's growth experience, at both the central- and local-levels.,This course provides an overview of the Chinese economy, with two main focuses. First, we will review the significant reforms that happened in China in the past four decades, which fundamentally reshaped the modern China s we see today. Second, we will discuss some of the China's key political and economic institutions, and their implication on China and the rest of the world. Throughout the course, special emphasis will be given to the role of the state in China's growth experience, at both the central- and local-levels.
Instructor(s): Wang, S Terms Offered: Spring
Equivalent Course(s): PBPL 25585, PPHA 35585

ECON 23000. Money and Banking. 100 Units.
This course covers economic theories and topical issues in money and banking. We discuss such "traditional" topics as the quantity theory, the Phillips curve, and the money creation process. We also investigate models of bank runs and financial crises, the tradeoff between rules and discretion, and the New Macroeconomic Synthesis of New Classical. Other topics include New Keynesian approaches to modeling money and monetary policy, practical and institutional issues in European and U.S. monetary policy, and the 2008 financial crisis.
Instructor(s): H. Uhlig Terms Offered: Autumn
Prerequisite(s): ECON 20200 (or ECON 20210); ECON 21020 and ECON 23950 are strongly recommended.

ECON 23050. Artificial Intelligence, Innovation, and Growth. 100 Units.
Social and cultural innovation, alongside economic growth, are among the most compelling, critical and challenging phenomena in modern social science. Innovation has always been associated with unleashing transformative growth in art, science, and the economy, and in this class we explore these issues in the context of the contemporary emergence of Artificial Intelligence (AI). AI represents a novel source of innovation in economy and society, but also a powerful tool for understanding, modeling, and steering innovation in new ways. The primary purpose of this course is to enable students to understand innovation and growth in the age of AI, and with tools from AI alongside theoretical frameworks and methods from economics, sociology, evolution, and complex systems necessary for study them. The course strives to provide students with a background in dynamic analysis, data analysis, and modern AI requisite for studying innovation in the modern age. We will also consider a number of compelling theoretical and empirical challenges, ranging from the paradox of institutionalizing innovation to inequalities that emerging AI capacities could create or remove to advances it could unleash in science and technology to the spread of misinformation to consequences of AI tools and "agents" in all domains of modern life to existential risks associated with AI. We will cover theories and models at an abstract and advanced level.
Instructor(s): Akcigit, U. and Evans, J. Terms Offered: Winter
Prerequisite(s): [MATH 13200 or MATH 15200 or MATH 16200 or MATH 15910 or MATH 20250 or MATH 20300] and [ECON 11010 or STAT 22000 or STAT 23400 or STAT 24400 or SOCI 20004 or SOCI 20602 or SOCI 20596]
Equivalent Course(s): SOCI 30620, ECMA 33050, DATA 20620, MACS 33050, MACS 23050, SOCI 20620

ECON 23200. Topics in Macroeconomics. 100 Units.
This course focuses on the use of dynamic general equilibrium models to study questions in macroeconomics. Topics include long-run growth and dynamic fiscal policy (Ricardian equivalence, tax smoothing, capital taxation), labor market search, industry investment, and asset pricing. On the technical side, we cover basic optimal control (Hamiltonians) and dynamic programming (Bellman equations).
Instructor(s): N. Stokey
Prerequisite(s): ECON 20200 (or ECON 20210) and MATH 20300 (or MATH 20310 or MATH 20700)

ECON 23410. Economic Growth. 100 Units.
The process of economic growth and the sources of differences in economic performance across nations are some of the most interesting, important and challenging areas in modern social science. You cannot travel or read the news without wondering why differences in standards of living among countries are so large. The primary purpose of this course is to introduce undergraduate students to these major issues and to the theoretical tools necessary for studying them. The course therefore strives to provide students with a solid background in dynamic economic analysis, as well as empirical examples and data analysis. We will cover models at an abstract and advanced level. You must have the degree of mathematical maturity associated with the concepts of functions, derivatives, integrals, Taylor series, optimization, ordinary differential equations. Some basic knowledge on regression analysis is also required.
Instructor(s): U. Akcigit Terms Offered: Winter
Prerequisite(s): ECON 20200 (or ECON 20210) and ECON 21020 (or ECON 21030)

ECON 23950. Economic Policy Analysis. 100 Units.
Building on the tools and methods that are developed in the core courses, this course analyzes fiscal and monetary policy and other topical issues. We use both theoretical and empirical approaches to understand the real-world problems.
Instructor(s): Staff Terms Offered: Autumn Spring
Prerequisite(s): ECON 20200/20210; ECON 21020 or 21030 strongly recommended.
Note(s): This course does not apply toward the economics major elective requirement. Students may not receive credit for both Econ 13000 and Econ 23950 toward the 42 degree credits.

ECON 24000. Labor Economics. 100 Units.
This course is an introduction to labor economics with an emphasis on applied microeconomic theory and empirical analysis. Topics to be covered include: labor supply and demand, taxes and transfers, minimum wages, immigration, human capital, creativity over the lifecycle and unemployment. For each topic we will describe the basic economic framework used in the analysis, analyze associated cases of study and drawn conclusions about what we have learned. Most of the examples will be taken from U.S. labor data and special attention will be given to randomized trials and experimental methods to infer causality.
Instructor(s): Staff Terms Offered: Summer
Prerequisite(s): ECON 10000/20000/20010

ECON 24050. Labor Economics and Public Policy. 100 Units.
Why are people paid what they're paid? We will consider this question using the tools of modern labor economics. Specifically, this course will cover theoretical models and empirical evidence on wage and employment determination. Special emphasis will be placed on understanding the effects of government policies on wages and employment. Topics to be covered include: labor supply and demand, taxes and transfers, minimum wages, immigration, human capital and education, discrimination, inequality, labor unions, and unemployment.
Instructor(s): Walters, C. Terms Offered: Spring
Prerequisite(s): (Econ 20100 or Econ 20110) and (Stat 23400 or Stat 24400 or Stat 24410)

ECON 24450. Inequality and the Social Safety Net: Theory, Empirics, and Policies. 100 Units.
This course will introduce students to key economic and conceptual issues surrounding inequality and the social safety net. We will study the theoretical underpinnings and empirical analysis of the social safety net, focusing on the effects of social insurance and public assistance programs on individual and societal outcomes. After studying models of the insurance-incentive tradeoff, we will apply these models and econometric strategies to the empirical analysis of social safety net programs. We will study how social safety net programs interact with labor markets, specifically human capital investment and work decisions, and how they affect long-term outcomes such as income, health, well-being, and inequality. Students will learn how to analyze the tradeoffs involved in social safety net programs and will learn the current state of evidence on these programs.
Instructor(s): M. Deshpande
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 25000. Introduction To Finance. 100 Units.
This course develops the tools to quantify the risk and return of financial instruments. These are applied to standard financial problems faced by firms and investors. Topics include arbitrage pricing, the capital asset pricing model, and the theory of efficient markets and option pricing.
Instructor(s): Staff
Prerequisite(s): ECON 20200/20210 and ECON 21020/21030

ECON 25100. Financial Economics; Speculative Markets. 100 Units.
This course focuses on the description, pricing, and hedging of basic derivative claims on financial assets. We study the characteristics, uses, and payoffs of a variety of contracts where the underlying claims include commodities, foreign currencies, bonds, stocks, or stock indices. We examine contracts such as options, swaps, and futures contracts. We use a unified approach (the technique of portfolio replication) to study pricing of these claims. Students also gain an understanding of strategies for hedging of the risks inherent in holding these derivative claims.
Instructor(s): F. Alvarez Terms Offered: Autumn
Prerequisite(s): ECON 20100/20110 and STAT 23400/24400/24410/ECON 21010

ECON 25120. Options and Volatility Products. 100 Units.
This class covers the pricing and hedging of different type of financial options, as well as of volatility products. The class will develop the analytical tools necessary to understand the basic properties of prices and hedging portfolios, and to write computer code for the valuation and hedging of a very large class of derivatives. The first part of the course covers the valuation of European and American options on Stocks, Commodities, Futures. The second step is to extends it to arbitrary derivative contracts. We will start with the binomial model, and then we will introduces its continuous time limit, as in Black-Scholes. We will proceed to study the valuation of an arbitrary general derivative where the underlying follows a continuous time process. We will further extend it to the case where the derivative depends on several stochastic process, which is required for some cases such as interest rate products, exotic options, and most importantly stochastic volatility. The last part of the class develops the theory of volatility products, with emphasis on variance and volatility swaps, the role of VIX, and derivatives written on VIX over them.

Instructor(s): F. Alvarez Terms Offered: Spring
Prerequisite(s): ECON 10000/20000/20010.
Note(s): While students don't need to take any other finance class as prerequisite, Introduction to Finance, and especially Speculative Markets are very helpful as background. Students are not required to take advanced calculus or partial differential equations, but any knowledge in those areas will help them to take the material beyond the parts covered in class. Finally, I will start with basic codes in excel, and move to the codes in Matlab, but only a minimum of familiarity with writing computer codes is necessary.

ECON 25520. Development Economics and Data Analysis. 100 Units.
Why do some countries grow faster than others? Why do farmers not adopt new technologies that generate higher yields? What is the most effective way to improve health, education and women's empowerment in middle and low income countries? We will examine these questions by applying the tools of economics to the best available data. In addition to mastering the economic literature on development economics, students will learn applied econometric techniques and how to apply them in practice. They will learn how to critically evaluate data analysis and spot potential biases: is the outcome variable likely to be subject to social desirability bias? is there potential selection bias or attrition bias? What techniques are best adapted to addressing these potential biases in the data? In the final part of the course we will cover the role of the International Financial Institutions (the IMF and World Bank) in international development. The course is designed for undergraduates with a strong interest in economics and data and previous experience using statistical software (such as R or Stata).
Instructor(s): R. Glennerster Terms Offered: TBD
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 25530. Behavioral Development Economics (Undergraduate) 100 Units.
This course will focus on the intersection of two rapidly growing and recently Nobel Prize-winning fields in economics - development, and behavioral economics. Behavioral development economics brings insights and tools from psychology and behavioral economics to the study of developing economies and poverty more generally. The class is aimed at students interested in either (or both) of the fields. A decent part of lectures will be focused on introducing and describing tools of behavioral economics, before moving to applications in low- and middle-income countries.
Instructor(s): A. Karing Terms Offered: TBD
Prerequisite(s): Econ 20100/20110 and Econ 21020/21030

ECON 25540. Poverty and Public Policy. 100 Units.
This course covers the extent and nature of poverty, mainly in the United States and other rich countries. We begin with the measurement of poverty, deprivation and homelessness. We then discuss causes of these problems, rationales for government interventions, and the effectiveness of various public policies. The course will focus on the empirical evidence on each topic, but begin with the theoretical foundation in each area.
Instructor(s): Meyer, Bruce Terms Offered: Winter
Equivalent Course(s): PBPL 23215

ECON 26010. Public Finance. 100 Units.
This course addresses the measurement, explanation, and consequences of government activity including tax systems, expenditure programs, and regulatory arrangements. Topics include cross-country comparisons of government behavior, market analyses of public policy, the incidence of government activity, and effects of economic activity on politics and public policy.
Instructor(s): M. Golosov Terms Offered: TBD
Prerequisite(s): ECON 20200/20210 and ECON 21020 (or ECON 21030)
Note(s): ECON 26010 or 26020 may be used as an economics elective, but only one may be used toward degree requirements.

ECON 26030. The Economics of Socialism. 100 Units.
The course examines the economic theories of socialism ranging from Karl Marx's to market socialism, as well as theories of market power, collective action, and price regulation. These theories are applied to the measurement of socialism, income distribution, surplus value, and the degree of exploitation of labor. These metrics are used to compare various mixed economies including the Nordic model and various sectors in the United States. We consider how the economics of socialism might evolve as the health sector grows in the near future and artificial intelligence transforms the workplace in the long run.
Instructor(s): C. Mulligan
Prerequisite(s): Econ 20100/20110

ECON 26040. Human Capital and the Economy. 100 Units.
This course introduces the concept of human capital, its accumulation process, its role in family decisions, and its impact on the economy. Several models are presented and discussed, covering a wide range of topics, including parental altruism, education, bequests, health, fertility, support in old age, income inequality, intergenerational transmission of wealth, specialization, division of labor, and economic growth. The theory is complemented with historical evidence from different countries and periods.
Instructor(s): P. Pena Terms Offered: Spring
Prerequisite(s): Econ 20200/20210

ECON 26610. The Economics of Cities and Regions. 100 Units.
This course studies business and individual location decisions and how they determine the main economic forces that lead to the existence and performance of cities and regional agglomerations. The course starts by developing a simple theory of cities and its implications for city size, firm productivity, and housing prices. It then studies evidence of the impact of cities on firm and worker productivity, urban amenities, and congestion. We will discuss the problems in measuring these forces, the methodologies to do so, as well as the implications of this measurement for businesses, individuals, and urban policy. We will also study the internal structure of cities, and how to evaluate the effect of new infrastructure or policy on land and housing values as well as on overall welfare. Finally, the course will analyze the role cities and regions play in aggregate economic development.
Instructor(s): Rossi-Hansberg, E. Terms Offered: TBD
Prerequisite(s): ECON 20100/20110 and ECON 21020/21030

ECON 26740. Climate Crossroads: Policy, Diplomacy, and the Global Future. 100 Units.
The world's atmosphere and oceans are rapidly warming-the result of human economic progress fueled by fossil fuels and other greenhouse gas emissions. A 2018 analysis by the Intergovernmental Panel on Climate Change concluded that stabilizing the atmosphere requires reaching "net zero" emissions, where as much greenhouse gas is removed from the atmosphere as is emitted. Achieving this demands a transformation of the global economy on a scale without historic precedent. This course begins by describing the nature and complexity of the climate policy challenge. It then explores the policy levers available to governments at both national and international levels to address it. The course considers perspectives from wealthy, advanced economies-historically the largest source of emissions-as well as emerging economies with significant development needs and rising emissions. It reviews the international framework for cooperation and negotiation on climate change through the United Nations Framework Convention on Climate Change. Finally, students will examine the challenges democratic societies face in maintaining public consensus on climate action, focusing on shifting U.S. policy frameworks. The course will be taught by three experienced practitioners: the White House lead on climate policy in the Obama and Biden Administrations, the former Foreign Minister of Pakistan, and the U.S.'s longtime lead negotiator at the UNFCCC and other international treaty negotiations.
Instructor(s): John Podesta, former White House Chief of Staff and Senior Advisor for International Climate Policy; Hina Rabbani Khar, former Foreign Minister of Pakistan; Sue Biniaz, Principal Deputy Special Envoy for Climate at the U.S. State Department; and Conor Carney Terms Offered: Autumn
Note(s): This course can count towards the Politics, Economics, and Society specialization in for the Climate and Sustainable Growth major.
Equivalent Course(s): PBPL 21025, GLST 21025, CCSG 21025, CEGU 21025

ECON 26920. Behavioral Economics and Policy. 100 Units.
The standard theory of rational choice exhibits explanatory power in a vast range of circumstances, including such disparate decision making environments as whether to commit a crime, have children, or seek to emigrate. Nonetheless, shortfalls from full rationality seem not to be uncommon, and are themselves, to some extent, systematic. Behavioral economics documents and tries to account for these departures from full rationality. This course looks at areas in which some modification of the traditional rational choice apparatus might most be warranted; these include decisions that unfold over time, involve low probability events, or implicate willpower. To what extent should public policy respond to shortfalls from rationality or concern itself with promoting happiness?
Instructor(s): J. Leitzel Terms Offered: Autumn
Equivalent Course(s): PBPL 28805

ECON 27000. International Economics. 100 Units.
This course covers international economics with an emphasis on international trade. The basic theories of international trade are introduced and used to analyze welfare and distributional effects of international trade, government policies, and technology diffusion. In addition, this course also discusses the main empirical patterns of international trade and international investment.
Instructor(s): J. Castro-Vincenzi Terms Offered: Spring
Prerequisite(s): ECON 20100/20110
Equivalent Course(s): PBPL 27000

ECON 27300. Regulation of Vice. 100 Units.
This course discusses government policy regarding traditional vices (i.e., drinking, smoking, gambling, illicit sex, recreational drug use). Among policies considered are prohibition, taxation, treatment, decriminalization, and legalization. The intellectual framework employed to evaluate various policies is primarily economic, though other disciplines are drawn upon. This course is offered in alternate years.
Instructor(s): J. Leitzel Terms Offered: Winter
Prerequisite(s): ECON 20000 or PBPL 20000
Equivalent Course(s): PBPL 27300

ECON 27700. Health Economics and Public Policy. 100 Units.
This course analyzes the economics of health and medical care in the United States with particular attention to the role of government. The first part of the course examines the demand for health and medical and the structure and the consequences of public and private insurance. The second part of the course examines the supply of medical care, including professional training, specialization and compensation, hospital competition,

and finance and the determinants and consequences of technological change in medicine. The course concludes with an examination of recent proposals and initiatives for health care reform. Must have completed PPHA 32300 Principles of Microeconomics and Public Policy I or equivalent to enroll.
Instructor(s): Meltzer, D Terms Offered: Spring
Equivalent Course(s): PPHA 38300, CCTS 38300, PBPL 28300

ECON 28000. Industrial Organization. 100 Units.
This course extends the analysis from ECON 20100, with a focus on understanding the way firms make decisions and the effects of those decisions on market outcomes and welfare. The course examines the structure and behavior of firms within industries. Topics include oligopolistic behavior, the problems of regulating highly concentrated industries, and the implementation of U.S. antitrust policy.
Terms Offered: Spring
Prerequisite(s): ECON 20100/20110

ECON 28010. Applied Empirical Industrial Organization. 100 Units.
In this course, students will learn how to apply techniques and models developed in industrial organization and law and economics to important questions that arise in litigation and government regulation. We will be guided and informed by pure theory underlying industrial organization and implement it in a world of partial information, incomplete data, and even contradictory data, among other complexities. Students will learn how to develop inferences by applying the models to real world cases and data - ie, extracting the most information possible from partial, imperfect data, frequently with missing values or poorly-measured data points. These fact patterns will not always result in an incontrovertible answer. Thus, students will be expected to identify and express the "best argument for" and "best argument against" the questions posed to them. This means that students will be expected to (i) use theory as a guideline to assess the relevant facts, circumstances, and data, (ii) reach a view, (iii) succinctly express that view in writing and acknowledge and address contrary theory and empirical results. Students will also see actual expert reports and/or white papers that have been prepared in actual disputes and investigations. Part of the grade will be based on an "expert report" written by the students in small teams.
Prerequisite(s): Econ 20100/20110 and Econ 21020/21030
Note(s): Standard Track Economics majors should register for Econ 28010

ECON 28030. Markets and Regulation. 100 Units.
This is an applied industrial organization course that examines economically regulated market structures. We will analyze: a) types of market structures that particularly generate economic regulation; b) common methods used by regulatory agencies given a particular market structure; and c) models of the supply of and the demand for regulation of markets, with emphasis on maximizing behavior on the part of both suppliers (regulators) and demanders (firms, consumers, political representatives). We will focus on non-financial markets, as financial markets are well-covered in other courses.
Instructor(s): Kathryn Ierulli Terms Offered: Autumn
Prerequisite(s): PQ: PBPL 20000 or equivalent
Equivalent Course(s): PBPL 28670

ECON 28060. The Economics of Organizations: An Experimental Perspective. 100 Units.
This course offers an introduction to the experimental methodology while at the same time providing the students with up-to-date insights and findings on how to run an organization and how to manage a workforce. Students will learn the basics of the experimental methodology, learn about the most ground-breaking findings in experimental economics related to the functioning of firms, and know the relevant papers and findings in organizational and personnel economics with a particular emphasis on the question of how to set incentives for workers.
Prerequisite(s): ECON 10000/20000/20010 and STAT 22000/23400/24400/24410/ECON 21010

ECON 28620. Crony Capitalism. 100 Units.
The economic system prevailing in most of the world today differs greatly from the idealist version of free markets generally taught in economic classes. This course analyzes the role played by corporate governance, wealth inequality, regulation, the media, and the political process in general in producing these deviations. It will explain why crony capitalism prevails in most of the world and why it is becoming more entrenched also in the United States of America. The course, which requires only basic knowledge of economics, welcomes undergraduates. This is a cross-listed course offered under BUSN 35225 for Booth students and ECON 28620 for non-Booth students. Booth students will bid on BUSN 35225. Non-Booth student can register under ECON 28620 or, if space is available, enroll via the non-Booth registration process for BUSN 35225. ECON 28620 is not eligible for pass/fail.
Instructor(s): L. Zingales Terms Offered: Spring
Equivalent Course(s): BUSN 35225

ECON 29200. Issues and Methods in Microeconomics. 100 Units.
Microeconomics is the study of how agents make optimal choices when facing constraints. The course will start with a quick refresher in the "Economic Approach" as the basic tool for analysis in economics. We will continue with a model of causal inference, and link it with concepts students have learned in the econometrics course. Then, we introduce the use of experiments as an alternative methodology for the researchers to gather their own data. Finally, we cover some major topics in behavioral economics.

Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 20000/20010
Note(s): Study Abroad

ECON 29300. Issues and Methods in Macroeconomics. 100 Units.
Using tools and methods in economics, we will study issues in macroeconomics and international trade and finance. The topics we cover include both contemporary and classical issues such as tax incidence and distortions, optimal taxation, inflation, monetary policy, patterns and benefits of trade, and exchange rate determination. The objective of the course is to train students with analytical tools in macroeconomics so that they can understand, analyze, and evaluate various policies and policy proposals. To make the subject matters relevant and practical, students are strongly encouraged to read the Wall Street Journal and the Economist regularly to keep up with current events and controversies.
Instructor(s): Staff Terms Offered: Winter
Prerequisite(s): Econ 20200/20210
Note(s): Study Abroad

ECON 29700. Undergraduate Reading and Research. 100 Units.
Students are required to submit the College Reading and Research Course Form. Prerequisite(s): Consent of directors of the undergraduate program
Instructor(s): J. Wong Terms Offered: Autumn Spring Winter
Prerequisite(s): Consent of directors of the undergraduate program

ECON 29800. Undergraduate Honors Workshop. 100 Units.
For details, see the preceding Honors section.
Instructor(s): K. Yoshida, V. Lima Terms Offered: Autumn Spring Winter
Prerequisite(s): Faculty sponsorship and consent of honors workshop supervisors