Economics

The Economics PhD program at UC Berkeley is designed for students interested in pursuing advanced study and conducting original research in economics. The PhD degree is awarded in recognition of the recipient’s qualifications as a general economist and of the ability to make scholarly contributions in fields of specialization. New admissions to the graduate program are restricted to students pursuing the PhD degree. There is no external, terminal program for the MA degree.

Admission to the University

Minimum Requirements for Admission

The following minimum requirements apply to all graduate programs and will be verified by the Graduate Division:

1. A bachelor’s degree or recognized equivalent from an accredited institution;
2. A grade point average of B or better (3.0);
3. If the applicant comes from a country or political entity (e.g., Quebec) where English is not the official language, adequate proficiency in English to do graduate work, as evidenced by a TOEFL score of at least 90 on the iBT test, 570 on the paper-and-pencil test, or an IELTS Band score of at least 7 on a 9-point scale (note that individual programs may set higher levels for any of these); and
4. Sufficient undergraduate training to do graduate work in the given field.

Applicants Who Already Hold a Graduate Degree

The Graduate Council views academic degrees not as vocational training certificates, but as evidence of broad training in research methods, independent study, and articulation of learning. Therefore, applicants who already have academic graduate degrees should be able to pursue new subject matter at an advanced level without need to enroll in a related or similar graduate program.

Programs may consider students for an additional academic master’s or professional master’s degree only if the additional degree is in a distinctly different field.

Applicants admitted to a doctoral program that requires a master’s degree to be earned at Berkeley as a prerequisite (even though the applicant already has a master’s degree from another institution in the same or a closely allied field of study) will be permitted to undertake the second master’s degree, despite the overlap in field.

The Graduate Division will admit students for a second doctoral degree only if they meet the following guidelines:

1. Applicants with doctoral degrees may be admitted for an additional doctoral degree only if that degree program is in a general area of knowledge distinctly different from the field in which they earned their original degree. For example, a physics PhD could be admitted to a doctoral degree program in music or history; however, a student with a doctoral degree in mathematics would not be permitted to add a PhD in statistics.
2. Applicants who hold the PhD degree may be admitted to a professional doctorate or professional master’s degree program if there is no duplication of training involved.

Applicants may apply only to one single degree program or one concurrent degree program per admission cycle.

Required Documents for Applications

1. Transcripts: Applicants may upload unofficial transcripts with your application for the departmental initial review. If the applicant is admitted, then official transcripts of all college-level work will be required. Official transcripts must be in sealed envelopes as issued by the school(s) attended. If you have attended Berkeley, upload your unofficial transcript with your application for the departmental initial review. If you are admitted, an official transcript with evidence of degree conferral will not be required.
2. Letters of recommendation: Applicants may request online letters of recommendation through the online application system. Hard copies of recommendation letters must be sent directly to the program, not the Graduate Division.
3. Evidence of English language proficiency: All applicants from countries or political entities in which the official language is not English are required to submit official evidence of English language proficiency. English proficiency. This applies to applicants from Bangladesh, Burma, Nepal, India, Pakistan, Latin America, the Middle East, the People’s Republic of China, Taiwan, Japan, Korea, Southeast Asia, most European countries, and Quebec (Canada). However, applicants who, at the time of application, have already completed at least one year of full-time academic course work with grades of B or better at a US university may submit an official transcript from the US university to fulfill this requirement. The following courses will not fulfill this requirement:
   • courses in English as a Second Language,
   • courses conducted in a language other than English,
   • courses that will be completed after the application is submitted, and
   • courses of a non-academic nature.

If applicants have previously been denied admission to Berkeley on the basis of their English language proficiency, they must submit new test scores that meet the current minimum from one of the standardized tests. Official TOEFL score reports must be sent directly from Educational Test Services (ETS). The institution code for Berkeley is 4833. Official IELTS score reports must be mailed directly to our office from British Council. TOEFL and IELTS score reports are only valid for two years.

Where to Apply

Visit the Berkeley Graduate Division application page (http://grad.berkeley.edu/admissions/apply).

Admission to the Program

A degree equivalent to a US bachelor’s is required for admission to the program. An undergraduate degree in economics is not required for admission to the PhD program, provided that applicants have achieved an adequate background in economics and mathematics at the undergraduate level.

- Economics: All applicants are expected to have completed intermediate math-based economic theory courses. Further education in economics and economic theory is helpful, but not required.
- Math: Applicants must have knowledge of multivariate calculus, basic matrix algebra, and differential equations; completion of a two-year math sequence, which emphasizes proofs and derivations. Some
knowledge of statistics and elementary probability is highly desirable, as is additional coursework in algebra and real analysis.

**Normative Time Requirements**

In advancing to the PhD degree, students pass through two major stages:

1) **Preparation for candidacy** typically takes three years. During the first two semesters, students take courses to achieve competence in econometric methods, methods of economic history, and fundamentals of microeconomic and macroeconomic theory. During the next two years, students prepare for examination in two fields of specialization of their choosing, prepare a dissertation prospectus, and take an oral examination. When these steps are completed, students are advanced to candidacy.

2) **Completion of a dissertation** after advancing to candidacy typically takes one to two years. The dissertation must be based on original research and represent a significant contribution to the body of economic knowledge.

The entire process takes approximately five to six years, although some students are able to complete the program in less time.

**Time to Advancement**

**Curriculum**

During the first two semesters of graduate study, students must take a set of eight core courses to satisfy requirements in mathematics, economic history, economic theory, and econometrics. Syllabi for current and recent economics courses, including the core courses described below, can be found on the Economics Course Home Page Registry.

**Exemptions from Course Requirements**

Students with strong backgrounds in math and economics, who have completed the equivalent of the coursework outlined above, may be exempted from some or all of the first year course requirements. To qualify for an exemption, admitted students must provide documentation of coursework completed and grade received. Students excused from any or all of the required theory courses may be required to take advanced theory courses to supplement previous training. All exemptions from first year course work must be approved by both the course instructor and the graduate committee chair.

**Courses Required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201A &amp; ECON 201B</td>
<td>Economic Theory and Economic Theory</td>
<td>8</td>
</tr>
<tr>
<td>ECON 202A &amp; ECON 202B</td>
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<tr>
<td>ECON 204</td>
<td>Mathematical Tools for Economics</td>
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<tr>
<td>ECON 210A</td>
<td>Introduction to Economic History</td>
<td>3</td>
</tr>
<tr>
<td>ECON 240A &amp; ECON 240B</td>
<td>Econometrics and Econometrics</td>
<td>9</td>
</tr>
<tr>
<td>ECON Electives (2 semesters) per specialized study list:</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>preparation for 2 field exams (usually, one theoretical, one applied)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON Elective Dept Seminars (12 units/one semester)</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

**Preliminary Exams—Field Examination**

All graduate students must take written qualifying examinations in two fields of specialization. Students prepare for these examinations in the second year by completing graduate courses offered in their chosen fields. It is department policy that students be prepared in at least one applied field to avoid narrow specialization at this stage of their careers.

**Fields Available in the Economics Department**

- Advanced Economic Theory
- Comparative Economics
- Development Economics
- Econometrics
- Economic Demography
- Economic History
- Economics of Institutions
- Finance
- Financial Economics
- Industrial Organization
- International Economics
- Labor Economics
- Law and Economics
- Macroeconomics
- Mathematical Economics
- Political Economics
- Psychology and Economics
- Public Finance

Alternative fields offered by another department or designed by the student may be substituted for one of the fields above, if approved by the graduate committee. Alternative fields may include Education and Economics, Health Economics, Resource Economics, Urban and Regional Economics, or City and Regional Planning.

**Prospectus**

Students must complete at least one semester of any department seminars (https://www.econ.berkeley.edu/events/seminars) prior to taking their oral examination. This is typically done in the third year of study.

**Dissertation Prospectus and Oral Examination**

Students are encouraged to begin discussing possible dissertation topics with appropriate faculty members at an early stage. After completing the written field examinations, students choose a faculty member to serve as adviser on developing a dissertation topic involving significant and original research, and to supervise writing of a prospectus. The prospectus describes the research to be conducted, the techniques to be used, and initial findings. Students who cannot find an adviser on their own will be matched with a preliminary adviser at the beginning of the third year of study.

**Qualifying Examination**

When the prospectus is approved by the faculty adviser, the qualifying examination is scheduled. The examining committee consists of four faculty members who conduct an oral examination based on the student’s areas of specialization and on the dissertation prospectus. A primary function of the oral examination is to aid the student in developing a dissertation and to determine whether the student is sufficiently prepared to complete original research successfully.
Time in Candidacy

Advancement

Upon successful completion of the oral examination and selection of a dissertation committee, the student is advanced to candidacy. Following advancement to candidacy, students pursue research necessary for the completion of their dissertation. Students are encouraged to select dissertation topics that can be completed in one to two years. Except in highly unusual cases, a dissertation does not exceed 300 pages of double-spaced typescript, and dissertations of 100 pages or less are entirely acceptable if they are significant contributions to the body of economic knowledge.

Upon completion of the dissertation and its acceptance by the dissertation committee, the student is awarded the PhD degree.

Professional Placement

Students who have received, or will soon receive, the PhD in Economics are assisted by the department in finding suitable career positions. The department learns of available openings for qualified economists through an exchange of information with universities, colleges, government agencies, and research institutes.

The department staff coordinates and facilitates placement activities, and a faculty member oversees and advises placement. Serious effort is made to help students find positions in which their capacities will be both used and rewarded. The department has been highly successful in placing students, which is a reflection on the quality of its students and their training, and the importance the department places on this activity.

Past placement outcomes can be found on the department's website (https://www.econ.berkeley.edu/grad/program/placement-outcomes).

Economics

Expand all course descriptions [+]Collapse all course descriptions [-]

ECON 201A Economic Theory 4 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
Basic preparation for the Ph.D. program including theory of the firm and the consumer, game theory.
Economic Theory: Read More [+]

Rules & Requirements

Prerequisites: 101A-101B, 204, Mathematics 53 and 54; or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Economic Theory: Read Less [-]

ECON 201B Economic Theory 4 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Basic preparation for the Ph.D. program including agency theory and mechanism design, general equilibrium theory.
Economic Theory: Read More [+]

Rules & Requirements

Prerequisites: 101A-101B, 201A, 204, Mathematics 53 and 54; or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Economic Theory: Read Less [-]

ECON 202A Macroeconomic Theory 4 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
Basic preparation for the Ph.D. program including aggregation theory, national accounting and index problems, survey of major short-term models, implications of various expectations hypotheses, wage price determination, the role of money and financial assets, theories of consumption and investment, disequilibrium theory, dynamic systems, and international considerations.
Macroeconomic Theory: Read More [+]

Rules & Requirements

Prerequisites: 100A-100B or 101A-101B or equivalent. Mathematics 53 and 54 or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Macroeconomic Theory: Read Less [-]
ECON 202B Macroeconomic Theory 4 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Basic preparation for the Ph.D. program including aggregation theory, national accounting and index problems, survey of major short-term models, implications of various expectations hypotheses, wage price determination, the role of money and financial assets, theories of consumption and investment, disequilibrium theory, dynamic systems, and international considerations.

Rules & Requirements
Prerequisites: 100A-100B or 101A-101B or equivalent. Mathematics 50A or equivalent

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of discussion per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 204 Mathematical Tools for Economics 3 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
The course provides a rigorous abstract treatment of the elements of real analysis and linear algebra central to current research in economics. The course develops in the students the ability to read mathematical proofs and to compose simple proofs on their own.

Rules & Requirements
Prerequisites: Mathematics 53 and 54 or equivalent and consent of instructor

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week
Summer: 3 weeks - 10 hours of lecture and 5 hours of discussion per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 206 Mechanism Design and Agency Theory 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
This course will study the optimal design of mechanisms in the presence of incomplete information and imperfect observability. The course will begin with the "classic" principal-agent problem and will then develop its applications to the "implicit contracts" theory of agency and to the choice of government policies for regulated industries. The second half of the course will treat the design of auctions, regulation with costly or imperfect monitoring, mechanism design with limited contracts.

Rules & Requirements
Prerequisites: 201B and 209A or consent of instructor

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Formerly known as: 209B

ECON 207A Mathematical Economics 3 Units
Terms offered: Fall 2018, Fall 2011, Fall 2010
Mathematical analysis of economic theory. The problems treated involve as wide a range of mathematical techniques and of economic topics as possible, including theories of preference, utility, demand, personal probability, games and general equilibrium. Also listed as IDS 213A-213B and Math 213A-213B.

Rules & Requirements
Prerequisites: Math 104 and 110 and Statistics 101

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Mathematical Economics: Read Less [-]
ECON 207B Mathematical Economics 3 Units
Terms offered: Spring 2015, Spring 2011, Spring 2001
Mathematical analysis of economic theory. The problems treated involve as wide a range of mathematical techniques and of economic topics as possible, including theories of preference, utility, demand, personal probability, games and general equilibrium. Also listed as IDS 213A-213B and Math 213A-213B.
Mathematical Economics: Read More [+]
Rules & Requirements
Prerequisites: Math 104 and 110 and Statistics 101
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Mathematical Economics: Read Less [-]

ECON 208 Microeconomic Theory Seminar 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Microeconomic Theory Seminar: Read More [+]
Rules & Requirements
Prerequisites: Consent of instructor
Repeat rules: Course may be repeated for credit without restriction.
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Microeconomic Theory Seminar: Read Less [-]

ECON 209A Theory and Application of Non-Cooperative Games 3 Units
Terms offered: Fall 2013, Fall 2012, Fall 2011
This course will study both pure game theory and its application to such problems as oligopoly pricing, non-cooperative bargaining, predatory pricing, and optimal auctions. The focus will be on game theory as a modelling process as opposed to a body of known results.
Theory and Application of Non-Cooperative Games: Read More [+]
Rules & Requirements
Prerequisites: Consent of instructor
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Theory and Application of Non-Cooperative Games: Read Less [-]

ECON 209B Theory and Application of Non-Cooperative Games: II 3 Units
Terms offered: Spring 2016, Spring 2015, Spring 2014
The course will cover basic topics not covered in 209A; will provide a more thorough treatment of topics covered in 209A; will cover a selection of advanced topics.
Theory and Application of Non-Cooperative Games: II: Read More [+]
Rules & Requirements
Prerequisites: 209A or consent of instructor
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Theory and Application of Non-Cooperative Games: II: Read Less [-]

ECON 210A Introduction to Economic History 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Survey of some central themes in world economic history. Required of all Ph.D. candidates in economics.
Introduction to Economic History: Read More [+]
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Introduction to Economic History: Read Less [-]
**ECON 210B Topics in European Economic History 3 Units**
Terms offered: Spring 2017, Spring 2016, Fall 2012
A survey of some central themes in European economic history.
Topics in European Economic History: Read More [+]

**Rules & Requirements**
Prerequisites: 210A

**Hours & Format**
Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Topics in European Economic History: Read Less [-]

**ECON 210C Topics in American Economic History 3 Units**
Terms offered: Fall 2018, Fall 2016, Fall 2013
A survey of some central themes in American economic history.
Topics in American Economic History: Read More [+]

**Rules & Requirements**
Prerequisites: 210A

**Hours & Format**
Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Topics in American Economic History: Read Less [-]

**ECON 211 Seminar in Economic History 3 Units**
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in Economic History: Read More [+]

**Rules & Requirements**
Prerequisites: Consent of instructor
Repeat rules: Course may be repeated for credit without restriction.

**Hours & Format**
Fall and/or spring: 15 weeks - 2 hours of seminar per week

**Additional Details**
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Seminar in Economic History: Read Less [-]

**ECON 215A Political Economics 3 Units**
Terms offered: Fall 2017, Fall 2016, Fall 2015
Political Economics: Read More [+]

**Rules & Requirements**
Prerequisites: 215A is a prerequisite to 215B

**Hours & Format**
Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Instructor: Roland
Political Economics: Read Less [-]

**ECON 215B Political Economics 3 Units**
Terms offered: Spring 2019, Spring 2018, Spring 2016
Political Economics: Read More [+]

**Rules & Requirements**
Prerequisites: 215A is a prerequisite to 215B

**Hours & Format**
Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Instructor: Roland
Political Economics: Read Less [-]
ECON C215A Political Economics 3 Units
Terms offered: Fall 2010, Fall 2009
Political Economics: Read More [+]

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Also listed as: POL SCI C237A

ECON C215B Political Economics 3 Units
Terms offered: Prior to 2007
Political Economics: Read More [+]

Rules & Requirements
Prerequisites: ECON C215A is a prerequisite to ECON C215B, and POL SCI C237A is a prerequisite to POL SCI C237B

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Also listed as: POL SCI C237B

ECON 217 Risk Seminar 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
This interdisciplinary seminar features seminar participants and guest speakers from academic institutions and financial services firms, presenting work on the analysis and management of risk in financial markets. Economics, statistics, finance, operations research, and other disciplines will be represented.
Risk Seminar: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor. Graduate standing
Credit Restrictions: Students will receive no credit for Economics 217 after completing Statistics 278B.<BR/>Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Offered for satisfactory/unsatisfactory grade only.
Instructors: Goldberg, Anderson
Risk Seminar: Read Less [-]

ECON 218 Seminar in Psychology and Economics 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
A graduate seminar in the field of behavioral economics.
Seminar in Psychology and Economics: Read More [+]

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Instructors: Della Vigna, Koszegi, Rabin
Seminar in Psychology and Economics: Read Less [-]
ECON 219A Foundations of Psychology and Economics 3 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
This course presents psychological and experimental economics research demonstrating departures from perfect rationality, self-interest, and other classical assumptions of economics and explores ways that these departures can be mathematically modeled and incorporated into mainstream positive and normative economics. The course will focus on the behavioral evidence itself, especially on specific formal assumptions that capture the findings in a way that can be used by economists. Economic applications will be used for illustrative purposes, but the course will emphasize formal theory.

Rules & Requirements
Prerequisites: 201A-201B or consent of instructor
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

ECON 219B Applications of Psychology and Economics 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
This course will build off of the material presented in 219A. It will expand on the psychological and experimental economic research presented there, but will emphasize a range of economic applications and especially empirical research.

Rules & Requirements
Prerequisites: 219A, 240A-240B or consent of instructor
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

ECON 220A Industrial Organization 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Market structure, conduct and performance in the unregulated sector of the American economy. Public policies related to the promotion or restriction of competition.

Rules & Requirements
Prerequisites: 219A
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

ECON 220B Industrial Organization 3 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
Continuation of 220A. The characteristics of regulated industries and the consequences of regulation for economic performance.

Rules & Requirements
Prerequisites: 220A
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

ECON 220C Special Topics in Industrial Organization 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
See course announcement for current topics.

Rules & Requirements
Prerequisites: 220A
Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
ECON 221 Seminar in Industrial Organization: Regulation and Public Enterprise 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in Industrial Organization: Regulation and Public Enterprise: Read More [+]

Rules & Requirements

Prerequisites: Consent of instructor
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON C222 Economics of Innovation 3 Units
Terms offered: Fall 2018, Fall 2016, Spring 2016, Fall 2015
Study of innovation, technical change, and intellectual property, including the industrial organization and performance of high-technology industries and firms; the use of economic, patent, and other bibliometric data for the analysis of technical change; legal and economic issues of intellectual property rights; science and technology policy; and the contributions of innovation and diffusion to economic growth. Methods of analysis are both theoretical and empirical, econometric and case study.
Economics of Innovation: Read More [+]

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Also listed as: PHDBA C279I
Economics of Innovation: Read Less [-]

ECON 224 Economics of Institutions 3 Units
Terms offered: Spring 2016, Spring 2015, Fall 2012
This course develops the proposition that institutions have pervasive ramifications for understanding economic organization. A comparative institutional approach is employed whereby the transaction is made the basic unit of analysis and alternative modes of organization are assessed with respect to their comparative contracting properties.
Economics of Institutions: Read More [+]

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Economics of Institutions: Read Less [-]

ECON C225 Workshop in Institutional Analysis 2 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018, Fall 2015, Fall 2014, Fall 2013
This seminar features current research of faculty, from UC Berkeley and elsewhere, and of advanced doctoral students who are investigating the efficacy of economic and non-economic forms of organization. An interdisciplinary perspective—combining aspects of law, economics, and organization—is maintained. Markets, hierarchies, hybrids, bureaus, and the supporting institutions of law and politics all come under scrutiny. The aspiration is to progressively build toward a new science of organization.
Workshop in Institutional Analysis: Read More [+]

Rules & Requirements

Prerequisites: Economics 100 or 101; Business Administration 110 or equivalent; or consent of instructor

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Economics/Graduate
Grading: Offered for satisfactory/unsatisfactory grade only.
Also listed as: PHDBA C270
Workshop in Institutional Analysis: Read Less [-]
**ECON 230A Public Economics 3 Units**

Terms offered: Fall 2018, Fall 2017, Fall 2016
The economic and policy analysis of government expenditures, taxes, and intergovernmental fiscal relations. 230A is not a prerequisite for 230B.

Public Economics: Read More [+]  
**Hours & Format**

**Fall and/or spring:** 15 weeks - 2 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate  
**Grading:** Letter grade.

Public Economics: Read Less [-]

**ECON 230B Public Economics 3 Units**

Terms offered: Spring 2019, Spring 2018, Spring 2017
Government intervention changes opportunities and incentives for firms, families, individuals, service providers, and state and local government. This course considers the incentive effects of government expenditure programs. The primary emphasis will be in the examination of the effect of social expenditure programs on individuals and families. Most of the papers will be empirical. The course will not contain an explicit section on methodology and econometric techniques; instead, relevant econometric techniques (e.g., discrete choice, duration analysis) will be discussed in the context of the empirical literature.

Public Economics: Read More [+]  
**Hours & Format**

**Fall and/or spring:** 15 weeks - 2 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate  
**Grading:** Letter grade.

Public Economics: Read Less [-]

**ECON 230C Public Sector Microeconomics 3 Units**

Terms offered: Spring 2009, Spring 1999
The economic and policy analysis of government expenditures, taxes, and intergovernmental fiscal relations.

Public Sector Microeconomics: Read More [+]  
**Hours & Format**

**Fall and/or spring:** 15 weeks - 2 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate  
**Grading:** Letter grade.

Public Sector Microeconomics: Read Less [-]

**ECON 231 Seminar in Public Sector Economics 3 Units**

Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in Public Sector Economics: Read More [+]  
**Rules & Requirements**

**Prerequisites:** Consent of instructor  
**Repeat rules:** Course may be repeated for credit without restriction.

**Hours & Format**

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate  
**Grading:** Letter grade.

Seminar in Public Sector Economics: Read Less [-]

**ECON 234A Macroeconomic Finance 3 Units**

Terms offered: Spring 2012, Spring 2011, Fall 2009
Introduction to macroeconomic finance. Course covers static portfolio choice, capital asset pricing model (CAPM), consumption based models, dynamic equilibrium asset pricing theories, and current issues in behavioral finance. Strong emphasis on household finance and risk-sharing. Course is both theoretical and empirical.

Macroeconomic Finance: Read More [+]  
**Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate  
**Grading:** Letter grade.

Formerly known as: 236D  
Macroeconomic Finance: Read Less [-]
ECON 234C Financial Decision-Making in Firms 3 Units
Terms offered: Spring 2017, Spring 2015, Spring 2014
This course provides a theoretical and empirical treatment of the core
topics in corporate finance including internal corporate investment;
external corporate investment (mergers and acquisitions); capital
structure and financial contracting; bankruptcy; corporate governance.
Financial Decision-Making in Firms: Read More [+]
Rules & Requirements
Prerequisites: 240A-240B or equivalent

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Financial Decision-Making in Firms: Read Less [-]

ECON C234C Financial Decision-Making in Firms 3 Units
Terms offered: Spring 2019, Spring 2018
This course provides a theoretical and empirical treatment of the core
topics in corporate finance including internal corporate investment;
external corporate investment (mergers and acquisitions); capital
structure and financial contracting; bankruptcy; corporate governance.
Financial Decision-Making in Firms: Read More [+]
Rules & Requirements
Prerequisites: ECON 240A-240B or equivalent
Credit Restrictions: Students who have passed ECON 234C are not
eligible to also receive credit for passing ECON C234C.

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Instructor: Malmendier
Also listed as: PHDBA C239F
Financial Decision-Making in Firms: Read Less [-]

ECON 235 Financial Economics Seminar 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
This course presents speakers who work on the boundary of economics
and finance, on topics including asset pricing, behavioral finance, and
corporate finance.
Financial Economics Seminar: Read More [+]
Rules & Requirements
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Financial Economics Seminar: Read Less [-]

ECON 236A Aggregate Economics 3 Units
Terms offered: Fall 2018, Fall 2016, Fall 2014
Macroeconomic models; theory and practice of aggregate economics;
rational expectations models; finance theory integrated with macro.
Aggregate Economics: Read More [+]
Rules & Requirements
Prerequisites: For 236A: 201A-201B and 202A-202B. For 236B: 236A

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Aggregate Economics: Read Less [-]

ECON 236B Aggregate Economics 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Macroeconomic models; theory and practice of aggregate economics;
rational expectations models; finance theory integrated with macro.
Aggregate Economics: Read More [+]
Rules & Requirements
Prerequisites: For 236A: 201A-201B and 202A-202B. For 236B: 236A

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week
Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Aggregate Economics: Read Less [-]
ECON 237 Seminar in Advanced Macroeconomics and Money 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in Advanced Macroeconomics and Money: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 240B Econometrics 4 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Basic preparation for the Ph.D. program including generalized least squares; instrumental variables estimation; generalized method of moments; time series analysis; and nonlinear models.

Econometrics: Read More [+]

Rules & Requirements
Prerequisites: 240A or equivalent

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of discussion per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 241A Econometrics 2 Units
Terms offered: Spring 2018, Spring 2017, Spring 2015
Intended for students specializing in econometrics and others with strong mathematical backgrounds. Linear and nonlinear statistical models and their applications in economics. Special problems in analyzing data from non-controlled experiments.

Econometrics: Read More [+]

Rules & Requirements
Prerequisites: Econ 240A,B; linear algebra; multivariable calculus; basic probability and inference theory

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 240A Econometrics 5 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
Basic preparation for the Ph.D. program including probability and statistical theory and the classical linear regression model.

Econometrics: Read More [+]

Rules & Requirements
Prerequisites: 100A or 101A or equivalent; 100B or 101B or equivalent; Mathematics 53 and 54, or equivalent; Statistics 131A or equivalent

Hours & Format
Fall and/or spring: 15 weeks - 4 hours of lecture and 2 hours of discussion per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Formerly known as: 240

Econometrics: Read Less [-]
**ECON 241B Econometrics 2 Units**
Terms offered: Fall 2018, Fall 2017, Fall 2016
This course will cover fundamentals of time series econometrics. It is intended both for students specializing in econometric theory and for students interested in applying time series methods to economic data.
Econometrics: Read More [+]

**Rules & Requirements**

**Prerequisites:** Econ 240A-B, or equivalent

**Hours & Format**

Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate

**Grading:** Letter grade.

Econometrics: Read Less [-]

**ECON 241C Econometrics 2 Units**
Terms offered: Spring 2019
This course focuses on examples of nonlinear semi-parametric econometrics models.
Econometrics: Read More [+]

**Rules & Requirements**

**Prerequisites:** Econ 240A-B; linear algebra; multivariable calculus, basic probability and inference theory

**Hours & Format**

Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate

**Grading:** Letter grade.

Econometrics: Read Less [-]

**ECON 242 Seminar in Econometrics 3 Units**
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in Econometrics: Read More [+]

**Rules & Requirements**

**Prerequisites:** 240A-240B

**Repeat rules:** Course may be repeated for credit without restriction.

**Hours & Format**

Fall and/or spring: 15 weeks - 2 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate

**Grading:** Letter grade.

Seminar in Econometrics: Read Less [-]

**ECON 244 Applied Econometrics 3 Units**
Terms offered: Fall 2018, Fall 2017, Fall 2016
Methods of applied econometrics, with emphasis on alternative modelling strategies and problems met in practice. Intended for doctoral students conducting empirical research.
Applied Econometrics: Read More [+]

**Rules & Requirements**

**Prerequisites:** 240A-240B

**Hours & Format**

Fall and/or spring: 15 weeks - 3 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate

**Grading:** Letter grade.

Applied Econometrics: Read Less [-]

**ECON 250A Labor Economics 3 Units**
Terms offered: Fall 2018, Spring 2018, Fall 2016
Analysis of labor market behavior.
Labor Economics: Read More [+]

**Rules & Requirements**

**Prerequisites:** 250A is prerequisite to 250B. Consent of instructor

**Hours & Format**

Fall and/or spring: 15 weeks - 3 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate

**Grading:** Letter grade.

Labor Economics: Read Less [-]

**ECON 250B Labor Economics 3 Units**
Terms offered: Spring 2019, Spring 2016, Spring 2015
Analysis of labor market behavior.
Labor Economics: Read More [+]

**Rules & Requirements**

**Prerequisites:** 250A is prerequisite to 250B. Consent of instructor

**Hours & Format**

Fall and/or spring: 15 weeks - 2 hours of lecture per week

**Additional Details**

**Subject/Course Level:** Economics/Graduate

**Grading:** Letter grade.

Labor Economics: Read Less [-]
ECON 250C Labor Economics 3 Units
Terms offered: Fall 2014, Spring 2013, Spring 2012
Analysis of labor market behavior.
Labor Economics: Read More [+]

Rules & Requirements
Prerequisites: 250B

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 251 Seminar in Labor Economics 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar for students at the doctoral dissertation level.
Seminar in Labor Economics: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

ECON 260A Comparative Economics 3 Units
Terms offered: Fall 2017, Fall 2016, Fall 2015
New issues raised by transition for economics. Political economy of reform: speed, sequencing, reform design, political economy of privatization. Allocative changes: speed of sectoral reallocation, price liberalization, output fall and macroeconomic dynamics, law enforcement, dynamics of institutional change.
Comparative Economics: Read More [+]

Rules & Requirements
Prerequisites: 260A is prerequisite to 260B

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Instructor: Roland
Comparative Economics: Read Less [-]

ECON 270B Development Economics 3 Units
Terms offered: Spring 2019, Spring 2018, Spring 2017
Problems of underdevelopment and poverty, policy issues and development strategies.
Development Economics: Read More [+]

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Development Economics: Read Less [-]

ECON 270C Development Economics 3 Units
Terms offered: Spring 2017, Spring 2016, Spring 2015
Basic macro-policy planning with investment project analysis.
Development Economics: Read More [+]

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Development Economics: Read Less [-]
ECON C270A Microeconomics of Development 3 Units
Terms offered: Fall 2018, Fall 2017, Fall 2016
Theoretical and empirical analyses of poverty and inequality, household and community behavior, and contract and institutions in the context of developing countries.

Microeconomics of Development: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor

Hours & Format
Fall and/or spring: 15 weeks - 4 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Also listed as: A,RESEC C251

ECON 271 Seminar in Development Economics 3 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in Development Economics: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Instructor: Miguel

ECON 274 Global Poverty and Impact Evaluation 4 Units
Terms offered: Spring 2016, Spring 2015, Spring 2013
Rather than simply describing the causes and symptoms of global poverty, this course will explore the variety of tools available for rigorously measuring the impact of development programs. Through weekly case studies of field research, the course will cover impact evaluation theory and methods. The course will culminate with a final project in which each student will design an impact evaluation of a policy or intervention.

Global Poverty and Impact Evaluation: Read More [+]

Rules & Requirements
Prerequisites: At least one prior term of intermediate economics (i.e., 100A or 100B) and some prior coursework in statistics

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Instructor: Miguel

ECON C275A Economic Demography 3 Units
Terms offered: Spring 2019, Spring 2015, Spring 2014
Economic consequences of demographic change in developing and developed countries including capital formation, labor markets, and intergenerational transfers. Economic determinants of fertility, mortality and migration.

Economic Demography: Read More [+]

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.

Instructor: Lee

Also listed as: DEMOG C275A

Economic Demography: Read Less [-]
**ECON 280A International Economics 3 Units**
Terms offered: Fall 2018, Fall 2017, Fall 2016
The world economy as a general equilibrium system. The theory of international economics, trade policy.
International Economics: Read More [+]

**ECON 280B International Economics 3 Units**
Terms offered: Fall 2017, Fall 2016, Fall 2015
This course develops basic theoretical models for studying issues in open-economy macroeconomics. The current account and the trade balance, international capital market integration, developing country debt problems, the real exchange rate, fiscal policy in the open economy, and international policy coordination.
International Economics: Read More [+]

**ECON 280C International Economics 3 Units**
Terms offered: Spring 2019, Spring 2018, Spring 2017
This course is an empirical treatment of open-economy macroeconomics and finance. Topics include trade elasticities, the determination of the trade balance and income under fixed and floating exchange rates, purchasing power parity, devaluation in small open economies, quantifying the degree of international capital mobility, implications for the effectiveness of monetary and fiscal policy, international interdependence and coordination, models of exchange rate determination.
International Economics: Read More [+]

**ECON 281 Seminar in International Trade and Finance 3 Units**
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminar in International Trade and Finance: Read More [+]

**ECON 291 Departmental Seminar 1 Unit**
Terms offered: Spring 2019, Fall 2018, Spring 2018
A general interest seminar featuring speakers and topics of broad interest whose work will be important for all areas of economics.
Departmental Seminar: Read More [+]

**ECON 295 Survey of Research in Economics 1 Unit**
Terms offered: Spring 2019, Fall 2018, Spring 2018
Presentations by departmental faculty of new research directions in different subfields of economics.
Survey of Research in Economics: Read More [+]

Repeat rules: Course may be repeated for credit without restriction.
ECON 296 Special Topics in Economics 3 Units
Terms offered: Spring 2014, Spring 2013, Fall 2010
Topics of different sections to be announced annually.
Special Topics in Economics: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Letter grade.
Special Topics in Economics: Read Less [-]

ECON 298 Directed Group Study for Graduates 1 - 4 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Seminars for the group of selected topics, which will vary from year to year.
Directed Group Study for Graduates: Read More [+]

Rules & Requirements
Prerequisites: Consent of instructor

Hours & Format
Fall and/or spring: 15 weeks - 0 hours of independent study per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Offered for satisfactory/unsatisfactory grade only.

ECON 299 Supervised Independent Study and Research 1 - 12 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Open to candidates for the Ph.D. degree who have passed the qualifying examination and who are engaged in research for the thesis, and in special cases, with consent of the instructor in charge, to graduate students who desire to do special work in a particular field.
Supervised Independent Study and Research: Read More [+]

Rules & Requirements
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 0 hours of independent study per week
Summer:
6 weeks - 0 hours of independent study per week
8 weeks - 0 hours of independent study per week

Additional Details
Subject/Course Level: Economics/Graduate
Grading: Offered for satisfactory/unsatisfactory grade only.

ECON 301 GSI Practicum 4 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Course credit for experience gained in academic teaching through employment as a graduate student instructor.
GSI Practicum: Read More [+]

Rules & Requirements
Prerequisites: Appointment as graduate student instructor in department, consent of graduate advisor
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Economics/Professional course for teachers or prospective teachers
Grading: Offered for satisfactory/unsatisfactory grade only.
Instructor: Olney
GSI Practicum: Read Less [-]

Special Topics in Economics: Read Less [-]
ECON 375 GSI Pedagogy Workshop 2 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
This course is the pedagogy workshop for graduate student instructors (GSIs) in the Departments of Economics and Agricultural and Resource Economics (ARE), and satisfies the Graduate Division requirement for first-time GSIs. The goal of the workshop is to teach teaching. Through readings, discussion, assignments, and in-class activities, GSIs develop teaching skills grounded in pedagogical research.
GSI Pedagogy Workshop: Read More [+]

Rules & Requirements
Credit Restrictions: Not repeatable.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Economics/Professional course for teachers or prospective teachers
Grading: Offered for satisfactory/unsatisfactory grade only.
Instructor: Olney

ECON 602 Individual Study for Doctoral Students 1 - 8 Units
Terms offered: Spring 2019, Fall 2018, Spring 2018
Individual study in consultation with the major field advisor, intended to provide an opportunity for qualified graduate students to prepare themselves for the various examinations required of candidates for the Ph.D. A student will be permitted to accumulate a maximum of 16 units of 602.
Individual Study for Doctoral Students: Read More [+]

Rules & Requirements
Credit Restrictions: Course does not satisfy unit or residence requirements for doctoral degree.
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 0 hours of independent study per week

Additional Details
Subject/Course Level: Economics/Graduate examination preparation
Grading: Offered for satisfactory/unsatisfactory grade only.
Individual Study for Doctoral Students: Read Less [-]