

# Health Policy

The PhD Program in Health Policy at UC Berkeley is distinguished by its interdisciplinary application of the social and behavioral science disciplines to real-world health issues. Students select a specialty field from among three tracks (Health Economics, Organizations & Management, and Population Health Sciences) while receiving rigorous training in quantitative research methods. Students augment their training through skills and knowledge from UC Berkeley's top-ranked Economics, Political Science, and Sociology departments, as well as the Haas School of Business and the Goldman School of Public Policy. Graduates of the Health Policy program are well prepared to assume academic careers in research and teaching. The program's interdisciplinary social and behavioral sciences approach to health services and policy research is a cornerstone of the PhD program that enables students to tailor much of their coursework to their own research interests.

## Admission to the University

### Applying for Graduate Admission

Thank you for considering UC Berkeley for graduate study! UC Berkeley offers more than 120 graduate programs representing the breadth and depth of interdisciplinary scholarship. A complete list of graduate academic departments, degrees offered, and application deadlines can be found on the Graduate Division website (<http://grad.berkeley.edu/programs/list/>).

Prospective students must submit an online application to be considered for admission, in addition to any supplemental materials specific to the program for which they are applying. The online application can be found on the Graduate Division website (<http://grad.berkeley.edu/admissions/>).

### Admission Requirements

The minimum graduate admission requirements are:

1. A bachelor's degree or recognized equivalent from an accredited institution;
2. A satisfactory scholastic average, usually a minimum grade-point average (GPA) of 3.0 (B) on a 4.0 scale; and
3. Enough undergraduate training to do graduate work in your chosen field.

For a list of requirements to complete your graduate application, please see the Graduate Division's Admissions Requirements page (<https://grad.berkeley.edu/admissions/steps-to-apply/requirements/>). It is also important to check with the program or department of interest, as they may have additional requirements specific to their program of study and degree. Department contact information can be found here (<http://guide.berkeley.edu/graduate/degree-programs/>).

### Where to apply?

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

### Admission to the Health Policy PhD Program

Successful applicants have a clear research focus in health policy and/or health services research. Experience working in the health sector

is viewed favorably by the admissions committee, as is prior research experience.

Entering students should have a foundation of basic knowledge in microeconomics, epidemiology, and statistics. A master's degree is preferred but not required for this program. Applicants without a master's degree should have at least two years of related experience. Additional admission requirements include GRE scores (average scores for admitted applicants are in the 70th percentile or above) and three letters of recommendation.

### Health Policy PhD Course Requirements

Specialty fields:

- Health Economics
- Organizations & Management
- Population Health Sciences

### Curriculum Requirements

All students must take the core courses PB HLTH 237C, PB HLTH 237D, PB HLTH 237E, and PB HLTH 237F, five specialty field courses, three quantitative research methods courses, and three additional graduate elective courses.

### Required Core Courses for All Specialty Fields

PB HLTH 237C	Health Policy Research Colloquium	1
PB HLTH 237D	Health Policy PhD Dissertation Seminar	2
PB HLTH 237E	Doctoral Seminar in Health Organizations & Management	2
PB HLTH 237F	Doctoral Seminar in Health Economics	2

### Health Economics Course Requirements

#### Specialty Field Core Requirement

ECON 201A	Economic Theory	4
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#### Specialty Field Electives

Students select four courses, including a two-course sequence

ECON 201B	Economic Theory	4
ECON 219A	Foundations of Psychology and Economics	3
ECON 219B	Applications of Psychology and Economics	3
ECON 220A & ECON 220B	Industrial Organization and Industrial Organization	6
ECON 230A/230B	Public Economics	3
ECON 250A & ECON 250B	Labor Economics and Labor Economics	6
ECON 270B & ECON 270C	Development Economics and Development Economics	6
DEMOG C275A	Economic Demography	3
PB HLTH 226A	Health Economics A	3
PUB POL 251	Microeconomic Organization and Policy Analysis	3
PUB POL 259	Benefit-Cost Analysis	4

#### Quantitative Research Methods

A,RESEC 212	Econometrics: Multiple Equation Estimation	4
A,RESEC 213	Applied Econometrics	4
ECON 244	Applied Econometrics	3

INFO 251	Applied Machine Learning	4
PB HLTH C240B	Biostatistical Methods: Survival Analysis and Causality	4
PB HLTH C240C	Biostatistical Methods: Computational Statistics with Applications in Biology and Medicine	4
PB HLTH 241	Intermediate Biostatistics for Public Health	4
PB HLTH C242C	Longitudinal Data Analysis	4
PB HLTH 244	Big Data: A Public Health Perspective	3
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 250B	Epidemiologic Methods II	4
PB HLTH 252	Epidemiological Analysis	4
PB HLTH 252D	Introduction to Causal Inference	4
PB HLTH 252E	Advanced Topics in Causal Inference	4
POL SCI 236A	The Statistics of Causal Inference in the Social Sciences	4

**Electives**

Three additional elective courses taken for a letter grade from among Berkeley's wide offering of graduate courses. Students should work with their advisor to select an appropriate mix of courses to ensure multidisciplinary but deep methodological and substantive expertise.

## Organization and Management Course Requirements

**Speciality Field Core Requirement**

PB HLTH 224D	Doctoral Seminar: Organizational Analysis of the Health Care Sector (Organizational Analysis of the Healthcare Sector)	3
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**Speciality Field Electives**

Students select four courses, with one micro and one macro course

**Micro-Organizational**

INFO 233	Social Psychology and Information Technology [3]
PHDBA 259A	Research in Micro-Organizational Behavior [3]
PHDBA 259E	Research Seminar in Behavioral Science [4]
PHDBA 259S	Research Seminar in Management of Organizations [2-4]
PUB POL 290	Special Topics in Public Policy [1-4]

**Macro-Organizational**

PHDBA 259C	Research Workshop on Macro Organizational Behavior [3]
PHDBA 297T	Doctoral Topics in Business Administration [0.5-3]
PHDBA C270	Workshop in Institutional Analysis [2]
SOCIOL 280D	Advanced Study in Substantive Sociological Fields: Organizations [3]

**Other Electives**

DEMOG C280	Social Networks [4]
PUB POL 273	Public Management and Policy Implementation [4]
POL SCI 289	Research Topics in Public Organization [4]
PSYCH 290J	Seminars: Social [2]
SOCIOL 280DD	Sociology of Medicine [3]
SOC WEL 210I	Group, Organizational, and Community Dynamics [2]

**Quantitative Research Methods**

Students select three courses

EDUC 274A	Measurement in Education and the Social Sciences I	4
EDUC 274B	Measurement in Education and the Social Sciences II	4
EDUC 274C	Research Seminar in Measurement	2
EDUC 274D	Multidimensional Measurement	4
EDUC 275B	Data Analysis in Educational Research II	4
EDUC 275G	Hierarchical and Longitudinal Modeling	5
INFO 251	Applied Machine Learning	4
PB HLTH C242C	Longitudinal Data Analysis	4
PB HLTH 219D	Course Not Available	3
PB HLTH 241	Intermediate Biostatistics for Public Health	4
PB HLTH 244	Big Data: A Public Health Perspective	3
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 250B	Epidemiologic Methods II	4
PB HLTH 250C	Advanced Epidemiologic Methods	3
PB HLTH 252	Epidemiological Analysis	4
PB HLTH 252D	Introduction to Causal Inference	4
PB HLTH 252E	Advanced Topics in Causal Inference	4
PB HLTH C240B	Biostatistical Methods: Survival Analysis and Causality	4
PB HLTH C240C	Biostatistical Methods: Computational Statistics with Applications in Biology and Medicine	4
PHDBA 297B	Research and Theory in Business: Behavioral Science	3
POL SCI 239T	An Introduction to Computational Tools and Techniques for Social Science Research	4
POL SCI 239T	An Introduction to Computational Tools and Techniques for Social Science Research	4
POL SCI C236A	The Statistics of Causal Inference in the Social Science	4
PSYCH 206	Structural Equation Modeling	3
SOCIOL 273L	Computational Social Science	3
SOCIOL 273M	Computational Social Science	3

**Electives**

Three additional elective courses taken for a letter grade from among Berkeley's wide offering of graduate courses. Students should work with their advisor to select an appropriate mix of courses to ensure multidisciplinary but deep methodological and substantive expertise.

## Population Health Sciences Course Requirements

**Speciality Field Core Requirements**

Students select five courses

A,RESEC 212	Econometrics: Multiple Equation Estimation	4
A,RESEC 213	Applied Econometrics	4
DEMOG 210	Demographic Methods: Rates and Structures	4
ECON 244	Applied Econometrics	3
EDUC 274A	Measurement in Education and the Social Sciences I	4
EDUC 274B	Measurement in Education and the Social Sciences II	4
EDUC 274C	Research Seminar in Measurement	2
EDUC 274D	Multidimensional Measurement	4

EDUC 275B	Data Analysis in Educational Research II	4
EDUC 275G	Hierarchical and Longitudinal Modeling	5
INFO 201	Research Design and Applications for Data and Analysis	3
INFO 251	Applied Machine Learning	4
PB HLTH 196	Special Topics in Public Health	1-4
PB HLTH 219D	Course Not Available	3
PB HLTH 226C	Economics of Population Health	3
PB HLTH C240B	Biostatistical Methods: Survival Analysis and Causality	4
PB HLTH C240C	Biostatistical Methods: Computational Statistics with Applications in Biology and Medicine	4
PB HLTH 241	Intermediate Biostatistics for Public Health	4
PB HLTH C242C	Longitudinal Data Analysis	4
PB HLTH 243C	Information Systems in Public Health	2
PB HLTH 244	Big Data: A Public Health Perspective	3
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 250B	Epidemiologic Methods II	4
PB HLTH 250C	Advanced Epidemiologic Methods	3
PB HLTH 252	Epidemiological Analysis	4
PB HLTH 252D	Introduction to Causal Inference	4
PB HLTH 252E	Advanced Topics in Causal Inference	4
PB HLTH 290	Health Issues Seminars	1-4
DEVP 229	Quantitative Methods and Impact Evaluation	3
PUB POL 259	Benefit-Cost Analysis	4
POL SCI 239T	An Introduction to Computational Tools and Techniques for Social Science Research	4
POL SCI 236A	The Statistics of Causal Inference in the Social Sciences	4
PSYCH 206	Structural Equation Modeling	3
SOCIOL 273L	Computational Social Science	3
SOCIOL 273M	Computational Social Science	3

### Electives

Six additional courses taken for a letter grade from among Berkeley's wide offering of graduate courses. Students should work with their advisor to select an appropriate mix of courses to ensure multidisciplinary but deep methodological and substantive expertise.

## Specialty Field Examination

A comprehensive written examination in the student's specialty field must be successfully completed prior to the qualifying examination.

## Quantitative Research Methods Paper

An empirical research paper to demonstrate the student's ability to use doctoral-level quantitative research methods with real data must be successfully completed before the end of the third year of the program.

## Qualifying Examination

An oral qualifying examination must be passed before the student can be advanced to doctoral candidacy.

## Dissertation

An original research dissertation is required for the PhD degree.

Graduates can achieve and demonstrate expertise in the following major academic outcomes:

- Develop domain expertise in core works in health policy and the selected specialty field.
- Understand central social science theoretical frameworks and debates shaping health policy.
- Demonstrate substantive knowledge of the specialty field sufficient to design and teach graduate-level courses in that field.
- Demonstrate the ability to conduct rigorous quantitative research.
- Plan and conduct independent research using advanced research methods.
- Demonstrate the mastery of academia and grant writing, conference presentation, IRB procedures and ethics in research.
- Engage in intellectual exchange among students and faculty across the university to enhance interdisciplinary research and training.

Health Policy PhD students have access to a wide range of resources at UC Berkeley and UCSF, including highly regarded research centers. Below are brief descriptions of a selected list of research centers most closely aligned with the Health Policy PhD program. These Centers include faculty from a wide variety of backgrounds and disciplines who bring expertise in health services research and provide settings for intensive training and mentorship opportunities for trainees.

The Berkeley Center for Health Technology (BCHT) (<https://bcht.berkeley.edu/>), co-directed by Dr. James Robinson (Director) and Dr. Tim Brown (Associate Director), promotes the efficiency and effectiveness of healthcare through research and education on the development, insurance coverage, payment, and appropriate use of medical technologies. The focus of BCHT is on biopharmaceuticals, implantable medical devices, insurance benefit design, and payment methods. Research initiatives include leadership roundtables, case studies of leading organizations, and econometric analyses of public and private data sources. BCHT helps stakeholders design a healthcare system that combines innovation and entrepreneurship with economic efficiency and social fairness.

The UC Berkeley Nicholas C. Petris Center on Health Care Markets and Consumer Welfare (<https://petris.org/>), co-directed by Dr. Richard Scheffler (Director) and Dr. Brent Fulton (Associate Director), focuses on consumer protection, affordability and access to healthcare, especially for low and middle-income individuals. The Petris Center also focuses on and the role of information in consumer choice, and regulation and competition within healthcare markets. The research center is named after former California State Senator Nicholas Petris, who advocated strongly on behalf of California consumers for affordable, accessible, and quality healthcare.

The UC Berkeley Center for Healthcare Organizational and Innovation Research (CHOIR), (<http://choir.berkeley.edu/>) co-directed by Dr. Hector Rodriguez (Director) and Dr. Amanda Brewster (Associate Director) aspires to help make the U.S. healthcare system among the most responsive in the world through practice-based research and dissemination of evidence. CHOIR emphasizes innovations in healthcare delivery and assessment of organizational performance to improve the technical quality of care delivered, patient experience and outcomes of care, population health, and cost. CHOIR works to maximize their "voice" and impact through webinars, roundtables, and discussions with private and public sector action and thought leaders.

The Laboratory for Systems Medicine (<http://labsysmed.org/>), directed by Dr. Ziad Obermeyer, applies methods from machine learning, biostatistics, and econometrics to the complex world of medical diagnoses, interventions, and outcomes. The center translates large observational datasets into new ways to understand and improve the life and death decisions that providers and patients make every day, in the US and across the world.

The Center on the Economics and Demography of Aging (CEDA) (<https://www.populationsciences.berkeley.edu/ceda/>), directed by Professor William Dow, was founded in 1993 to promote interdisciplinary research on the economic and demographic aspects of aging. In response to the growing demand from government agencies, Congress, and academic researchers for timely, accessible, and practical information as well as basic research. At the central core of CEDA is a group of outstanding formal and mathematical and statistical demographers who apply their skills to a variety of research areas, including biodemography, demographic modeling and forecasting, and intergenerational transfers including fiscal accounting. This central core is enriched by other themes, notably psychological and behavioral economics with applications to economic and health-related behaviors.

The UC-Berkeley Opportunity Lab (O-Lab) (<http://www.olab.berkeley.edu/about/>), co-directed by Professor Ben Handel and Professor Hilary Hoynes serves as the central research hub for Berkeley scholars conducting rigorous, data-driven research on social and economic inequality in the United States. Our network of faculty and graduate students work across disciplines and study a wide array of topics, from the role of childhood food security on long-term economic security to the disparate impacts of climate change on low-income communities.

The UCSF Center for Vulnerable Populations (<https://cvp.ucsf.edu/>) at Zuckerberg San Francisco General Hospital carries out innovative research to prevent and treat chronic disease in populations for whom social conditions often conspire to both promote various chronic diseases and make their management more challenging. Beyond the local communities it serves, CVP is nationally and internationally known for its research in health communication and health policy to reduce health disparities, with special expertise in the social determinants of health, including literacy, food policy, poverty, and minority status, with a focus on the clinical conditions of pre-diabetes, diabetes, and cardiovascular disease. CVP is at the frontline of practice-based research on chronic diseases for the diverse and disadvantaged populations of San Francisco and the Bay Area.