

# Health Policy

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The PhD Program in Health Policy (formerly known as Health Services and Policy Analysis) 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 & Data Science) 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

### 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 has completed a basic degree 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 the 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. Unofficial transcripts must contain specific information including the name of the applicant, name of the school, all courses, grades, units, & degree conferral (if applicable).
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, by the recommender, not the Graduate Admissions.
3. **Evidence of English language proficiency:** All applicants who have completed a basic degree from a country or political entity in which the official language is not English are required to submit official evidence of English language proficiency. This applies to institutions 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.

Applicants who have previously applied to Berkeley must also submit new test scores that meet the current minimum requirement 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 for Graduate Organizations. Official IELTS score reports must be sent electronically from the testing center to University of California, Berkeley, Graduate Division, Sproul Hall, Rm 318 MC 5900, Berkeley, CA 94720. TOEFL and IELTS score reports are only valid for two years prior to beginning the graduate program at UC Berkeley. Note: score reports can not expire before the month of June.

## 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 80th percentile or above) and three letters of recommendation.

## Health Policy PhD Course Requirements

Available specialty fields:

- Health Economics
- Organizations & Management
- Population & Data Science

## 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 |
|-----------|-----------------|---|

### 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     | 3 |
| ECON 230A/230B                    | Public Economics  | 3 |
| ECON 250A & ECON 250B & ECON 250C | Labor Economics and Labor Economics and Labor Economics | 3 |
| ECON 270B & ECON 270C             | Development Economics and Development Economics         | 3 |
| 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

### Specialty Field Core Requirement

|              |   |   |
|--------------|---|---|
| PB HLTH 224A | Organizational Behavior and Management in Health Care | 3 |
|--------------|---|---|

### Specialty 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   | 3 |
| INFO 251      | Applied Machine Learning   | 4 |
| PB HLTH C242C | Longitudinal Data Analysis   | 4 |
| PB HLTH 219D  | Social and Behavioral Health Research: Introduction to Survey Methods                      | 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 & Data Science Course Requirements

### Specialty 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   | 3   |
| 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  | Social and Behavioral Health Research: Introduction to Survey Methods                      | 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.