Areas of Study

HEALTH POLICY
(PhD)
I. Health Policy PhD Program

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I. Health Policy PhD Program

OVERVIEW
Health policy is a scientific field of inquiry that examines the organization and financing of health systems, services delivery, health outcomes, and the management of population health. It involves investigation of all service sectors that affect health, not just the medical care system, and its purview is global. Health policy has been developing for several decades. The Berkeley PhD Program in Health Policy was first established at UC Berkeley in 1988 as “Health Services and Policy Analysis,” and its first Director was Richard Scheffler, PhD.

The PhD program is distinguished by its interdisciplinary application of the social and behavioral science disciplines to real world health issues. Students have access to all disciplines and professional schools at UC Berkeley, in addition to faculty and research programs at UC San Francisco. The PhD Program is a full-time program geared for careers in academia and research. Students typically complete the degree in 4-5 years. The program is administratively located in the School of Public Health. The Doctor of Philosophy degree is granted by the Graduate Division of the University of California, Berkeley.

Students who graduate with a PhD are well prepared to assume academic careers in research and teaching. Many of our graduates move directly to positions in academia, government, or research organizations, while others get post-doctorate fellowships to continue specific training in their area of interest and research.

MISSION
The mission of the Berkeley PhD Program in Health Policy is to prepare students for careers in research, teaching, and public service in university, governmental, and public policy settings. It is expected that through their research, teaching, and provision of expert advice, graduates of the PhD program will play a lead scientific role in addressing the many challenges facing health care and public health systems in the United States and other countries around the world.

CORE COMPETENCIES

<table>
<thead>
<tr>
<th>Foundational knowledge</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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<tbody>
<tr>
<td>Competency</td>
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<tr>
<td>Acquire knowledge of the context of health and health care systems, institutions, actors, and environment</td>
<td>PP210A/B Economics of Public Policy Analysis</td>
<td>237A/B Theories and Methods in Health Policy and Health Services Research</td>
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<table>
<thead>
<tr>
<th>Theoretical knowledge</th>
<th>Course 1</th>
<th>Course 2</th>
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<tr>
<td>Competency</td>
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<tr>
<td>Apply or develop theoretical and conceptual models relevant to health policy and services research.</td>
<td>PP210A/B Economics of Public Policy Analysis</td>
<td>237A/B Theories and Methods in Health Policy and Health Services Research</td>
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### Relevant and important HSR question development

<table>
<thead>
<tr>
<th>Competency</th>
<th>Course 1</th>
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<th>Course 3</th>
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<tbody>
<tr>
<td>Pose relevant and important research questions, evaluate them, and formulate solutions to health problems, practice, and policy</td>
<td>Research Methods Paper Requirement</td>
<td>237A/B Theories and Methods in Health Policy and Health Services Research</td>
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### Conceptual models and operational methods

<table>
<thead>
<tr>
<th>Competency</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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<tbody>
<tr>
<td>Use or develop a conceptual model to specify study constructs for a health policy and services research question and develop variables that reliably and validly measure these constructs</td>
<td>Research Methods Paper Requirement</td>
<td>237A/B Theories and Methods in Health Policy and Health Services Research</td>
<td>Dissertation Requirement</td>
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### Study designs

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<thead>
<tr>
<th>Competency</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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<tbody>
<tr>
<td>Describe the strengths and weaknesses of study designs to appropriately address health policy and services research questions</td>
<td>Research Methods Paper Requirement</td>
<td>PB HLTH 250B Epidemiology</td>
<td>237A/B Theories and Methods in Health Policy and Health Services Research</td>
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### Data collection and management methods

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<thead>
<tr>
<th>Competency</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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<tbody>
<tr>
<td>Sample and collect primary health and health care data and/or assemble and manage existing data from public and private sources</td>
<td>Research Methods Paper Requirement</td>
<td>Dissertation requirement</td>
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</tbody>
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### Research conduct management

<table>
<thead>
<tr>
<th>Competency</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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</thead>
<tbody>
<tr>
<td>Execute and document procedures that ensure the reproducibility of the science, the responsible use of resources, and the ethical treatment of research subjects</td>
<td>Required Citi Training on Human Subjects Protection</td>
<td>Dissertation requirement</td>
<td></td>
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</tbody>
</table>

### Data analysis

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<tr>
<th>Competency</th>
<th>Course 1</th>
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<th>Course 3</th>
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<tbody>
<tr>
<td>Demonstrate proficiency in the appropriate application of analytical techniques to evaluate health policy and services</td>
<td>Research Methods Paper Requirement</td>
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### Professional development

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<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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<tbody>
<tr>
<td>Work collaboratively in teams within disciplines, across disciplines, and/or with stakeholders</td>
<td>PB HLTH 299.51</td>
<td>Dissertation</td>
<td>Seminar</td>
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### Communication

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<th>Competency</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
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</thead>
<tbody>
<tr>
<td>Effectively communicate the process, findings, and implications of health policy and services research through multiple modalities to scientific peers and other stakeholders</td>
<td>PB HLTH 299.51</td>
<td>Dissertation</td>
<td>Seminar</td>
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### Knowledge transfer

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<th>Competency</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge translation to policy and practice</td>
<td>PB HLTH 299.51</td>
<td>Dissertation</td>
<td>Seminar</td>
</tr>
</tbody>
</table>

### LEARNING OBJECTIVES

Graduates of the PhD Program in Health Policy will be able to 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 specialty field sufficient to design and teach graduate level courses in that field.
- Demonstrate ability to conduct rigorous quantitative research.
- Plan and conduct independent research using advanced research methods.
- Master academic and grant writing, conference presentation, IRB procedures, and ethics in research.
- Foster cohesion and intellectual exchange among students and faculty across the university to enhance interdisciplinary research and training.

### II. Health Policy PhD Curriculum

**CURRICULUM REQUIREMENTS (ALL SPECIALTY FIELDS)**

**Prerequisite Courses**

Entering students should have foundational knowledge in microeconomics, epidemiology, and statistics. Students without prior Master’s-level coursework in these areas will need to remedy deficiencies in their first year.
Grading Standards
Students must receive a grade of B- or higher to satisfy course work requirements, including core and specialty field courses.

Unit Requirements
PhD students are required to complete a total of 60 units composed of courses, doctoral seminars, and independent studies. All students, with the exception of students in the Health Economics specialty field, should aim to complete coursework by the end of the second year.

Course descriptions for most of the courses can be found in the campus online catalog at guide.berkeley.edu. Please check the online schedule at schedule.berkeley.edu each semester for course availability.

Core Classes
Students must take PB HLTH 237A, B Theories and Methods in Health Policy and Health Services Research*, 5 specialty field courses, 3 research methods courses, and 3 courses in other specialty fields (aside from the student’s designated specialty field)**. Requirements for the interdisciplinary social science requirement are detailed within the course guidance for each specialty field. Students must receive a grade of B or higher to satisfy all course requirements, including core, specialty, and methods courses.

*Students entering before Fall 2017 take 4 semesters of the 1st/2nd year seminar.
** Current students are allowed to take core and elective non-specialty field courses from any of the other specialty fields in the PhD program.

Specialty Field
The Berkeley PhD Program in Health Policy has three specialty fields: Health Economics, Organizations and Management, and Population Health Sciences. Each specialty field has two required core courses and a minimum of three elective courses, as well as a specialty field exam.

Interdisciplinary Requirement
Students are required to take three courses from fields outside of their selected specialty field. The three courses can include any of the three specialty fields of the PhD program, in addition to the politics and policy courses listed below. Students without prior microeconomics training are required to take a year-long microeconomics sequence (PP210A/B: The Economics of Public Policy Analysis) to satisfy one of the three interdisciplinary course requirements.

The following Politics/Policy courses can count as satisfying the interdisciplinary requirement for all specialty fields:

PB HLTH 230 Advanced Health Politics and Policy
PP 290 Special Topics in Public Policy (varies)
PS 200 Major Themes in Comparative Analysis
PS 201A Comparative Analysis of Industrial Democracies
PS 203 Urban and Subnational Politics in Developing Countries
PS 206 Comparative Party Systems
Health Policy PhD Curriculum

PS 220A  Theories of International Relations
PS 247G  The Comparative Politics of the Welfare State
PS 259   Selected Topics in Public Law
PS 261   Political Behavior
PS 262   Voting Behavior and Public Opinion
PS 263   Mass Politics in Modern Democracies
PS 271   American Government and Political Field Seminar
PS 273   Urban Politics
PS 274   American Political Development
PS 279   Race, Immigration and Identity in US Politics
Law 220F Food Law and Policy
Law 248   Health Law
Law 263   International Human Rights Law: Theory and Practice
SOC 280C Political Sociology

Methods Requirement
Students must submit a paper demonstrating their competency in methods prior to the scheduling of their oral qualifying examinations. Professor Timothy Brown will review and approve the methods paper. Please allow at least 4-6 weeks for review, revision, and approval of this paper. The approval of this paper is required in order to submit the application for the Qualifying Exam to Graduate Division. The Degrees Office then requests at least 4 weeks for processing of this application before the QE date.

PhD Dissertation Seminar
After passing the specialty field exam, students are required to attend the Dissertation Seminar PB HLTH 299 and present their research analyses in the seminar or an equivalent seminar, during each semester until graduation.

Health Services Research Colloquium
The HSR colloquium is designed for PhD students in Health Policy. The seminar meets alternate Tuesdays from 12:40-2 p.m. in 714C University Hall. Students are required to enroll in the colloquium for one unit (S/U) in each of their first four semesters of the program, and upper year students are also expected to attend. In addition, students are strongly encouraged to regularly attend research colloquiums in their specialty field departments. Students can enroll for additional semesters or units, as needed, to fulfill minimum required units for GSR/GSI appointments.

Students will become familiar with the professional practice of presenting current research among peers and of critiquing peer research in a workshop setting. The HSR colloquium will meet roughly every other week during the semester. Speakers will generally be faculty and other local researchers presenting their current health policy-related research. Colloquiums will be open to the public, and vigorous intellectual exchange is encouraged throughout the presentation.

Colloquium papers will sometimes be distributed in advance. Students are expected to read the paper in advance, or if no paper is distributed, to read other relevant background research by the author or other researchers working on the same topic.
Attendance at six HSR colloquiums is required to satisfactorily earn each unit of credit. If students are unable to attend six HSR colloquiums, then they may choose to instead attend alternative research colloquiums; however, those alternative colloquiums should similarly be structured to encourage active discussion of HSR-relevant research presentations.

Students enrolling for more than 1 unit should attend commensurately more colloquiums elsewhere. At the end of each semester, students will be required to email the instructor a list of the colloquiums attended for credit.

**HEALTH ECONOMICS**

The Health Economics specialty field draws on economics, epidemiology, demography, and statistics to understand the causal relationship between different aspects of health and the health care sector. With an emphasis on quantifying relationships, health economics covers a broad range of study areas, including health production, demand & supply of health services, healthcare financing, behavioral responses to institutional or policy incentives, policy evaluations, and other efficiency and equity issues surrounding health. **Faculty Lead: Will Dow PhD**

**Core Requirements**
PB HLTH 237A, B  Theories and Methods in Health Policy and Health Services Research
PB HLTH 237D  Health Policy Dissertation Seminar (Year 3+)
PB HLTH 293C  Health Services Research Colloquium (Years 1-2)

**Interdisciplinary Requirement**
Three courses in one or more of the following areas:
1. Organizations and Management,
2. Population Health Sciences, and/or

**Specialty Field Requirements**
Health Economics students must take ECON 201A and a minimum of four specialty field courses.

**Specialty Field Core (1 course):** ECON 201A** Economic Theory
**Pre-requisite: Economics 204 (Summer)**

Math 104: Introduction to Analysis (Fall, Year 1) is recommended for students entering without exposure to real analysis. Econ 201A also requires a background in linear algebra and differential equations, so students entering without this background should also take Math 54 (Fall, Year 1).

**Specialty Field Electives (4 courses)**
ECON 201B  Economic Theory
ECON 219A  Foundations of Psychology and Economics
ECON 219B  Applications of Psychology and Economics
ECON 220A,B  Industrial Organization
ECON 230A,B  Public Economics
ECON 250A,B,C  Labor Economics
**Health Policy PhD Curriculum**

**ECON 270A,B,C**  Development Economics  
**ECON 275A**  Economic Demography  
**PP 251**  Microeconomic Organization & Policy Analysis  
**PP 259**  Cost-Benefit Analysis

**Research Methods (3 courses)**

- ARE 212***  Econometrics: Multiple Equation Estimation  
- ARE 213  Applied Econometrics  
- ECON 244  Applied Econometrics  
- PB HLTH 252D  Intro to Causal Inference  
- PB HLTH 245  Intro to Multivariate Public Health Statistics  
- PB HLTH C242C  Longitudinal Data Analysis  
- PB HLTH 241  Statistical Analysis of Categorical Data  
- PB HLTH 250B  Epidemiologic Methods II  
- PS 236  Statistics of Causal Inference in the Social Sciences

***ARE 210 has been found to be a useful prerequisite for ARE 212, but ARE 210 does not count toward the methods requirement.

**Specialty Field Exam**

Health Economics students are generally accountable for the content of the *Handbook of Health Economics* (edited by Anthony J. Culyer and Joseph P. Newhouse) for the specialty field exam, with specific sections of emphasis determined each year by the examining committee depending on the students’ sub-fields. The exam requirements consist of core material required of all students and one of five areas chosen by each student. In order to prepare, students are required to take 2 PhD-level courses in the economics department in one of these fields: Behavioral economics (Econ 219A/B), Industrial organization (Econ 220A/B), Public economics (Econ 230A/B), Labor economics (Econ 250A/B/C), or Development/demography (Econ 270A/B/C, Econ 275). The exam will be based on material covered in these classes, but will be in the context of health issues.

**ORGANIZATIONS AND MANAGEMENT**

The Organizations and Management specialty field trains scholars of organizational behavior and political behavior in health. Theories and methods in organizational sociology, political science, and social psychology are central to the study of health organizations. Specialty field courses in macro-organizational theory, micro-organizational theory, and organizational analysis of the health sector are required. The specialty field emphasizes the management of health care and public health organizations and systems, the implementation and dissemination of policies and practices within and across organizations, and the role of policy-making institutions as platforms for the creation and modification of health policies. **Faculty Lead: Hector Rodriguez PhD**

**Core Requirements:**

- PB HLTH 237A,B  Theories and Methods in Health Policy and Health Services Research  
- PB HLTH 237D  Health Policy Dissertation Seminar (Year 3+)  
- PB HLTH 237C  Health Services Research Colloquium (all years)
Interdisciplinary Requirement
Two core and/or specialty field courses in one or more of the following areas:
1. Politics and Policy,
2. Population Health Sciences, and/or
3. Health Economics.

If a masters-level microeconomics course has been completed in the past, a third course from one of these specialty fields should be taken. If one has not been completed, the student should take:
PP 210A,B The Economics of Public Policy Analysis (series counts as one course).

Specialty Field Requirements
Students in the Organizations and Management specialty field are expected to take 5 courses: 1 core course and 4 specialty field elective courses, with at least one specialty field elective course in each of the micro-organizational and micro-organizational categories.

Specialty Field Core (1 course): PB HLTH 224D Organizational Analysis of the Health Sector

Specialty Field Electives (Select 4 courses, with a minimum of 1 micro and 1 macro course)

Micro-Organizational
PhD BA 259A Seminar in Micro-Organizational Behavior
PhD BA 259C Research in Industrial Relations and Labor
PhD BA 259S Seminar in Organizational Behavior and Industrial Relations
PhD BA 297T Research in Micro-Organizational Behavior
Psy 290J Social Psychology (various seminars)

Macro-Organizational
PB HLTH 224C Advanced Health Organizations*
PhD BA 259B Seminar in Macro-Organizational Behavior
PhD BA 259D Seminar in Organizational Theory
PhD BA 279C Corporate Strategy and Technology
PS 280C Organizational Analysis: Structure, Control, & Cooperation
PS 289 Institutions and Institutionalism
SOC 205E Advanced Study – Industrial Sociology
SOC 280D Organizations
SOC 280R Advanced Study – Professions
*required of students beginning the 2016-17 academic year or earlier

Public Organizations and Policy
PS 209A Comparative Political Economy
PS 252 Legal Theory and Institutions
PS 261 Political Behavior
PS 279 Federalist Territoriality in American Politics
PS 289 Research Topics in Public Organization
PS 292 Advanced Study – Public Organization
PhD BA 279A Institutions, Interest Groups, and Public Policy
Research Methods (select three):
EDU 274B  Measurement in Education and Social Sciences
EDU 274C  Research Seminar in Measurement
EDU 274D  Multidimensional Measurement
EDU 275B  Data Analysis in Educational Research II
EDU 275G  Hierarchical and Longitudinal Modeling
PB HLTH C242C  Longitudinal Data Analysis
PB HLTH 219D  Introduction to Survey Methods
PB HLTH 245  Intro to Multivariate Public Health Statistics
PB HLTH 250B  Epidemiologic Methods II
PB HLTH 252A  Applied Sampling
PhD BA 297B  Research and Theory in Business: Behavior Science
PS 235  Introduction to Research Design
PS 243A  Qualitative and Multi-Methods Research
PS C236A  Statistics of Causal Inference in Social Sciences
PSY206  Structural Equation Modeling

POPULATION HEALTH SCIENCES
The Population Health Sciences specialty field trains students for research careers in the social, behavioral, and economic determinants of health and the study of interventions, policies, and practices that impact the health of populations and vulnerable communities. The specialty field emphasizes addressing the social and behavioral determinants of health through quantitative and mixed methods research informed by theories and methods in economics, psychology, demography, and social epidemiology. Training in innovative methodologies for establishing causal relationships in quasi-experimental research is a cornerstone of the Population Health Sciences specialty field. Faculty Lead: Lia Fernald PhD

Core Requirements
PB HLTH 237A,B  Theories and Methods in Health Policy and Health Services Research
PB HLTH 237D  Health Policy Dissertation Seminar (Year 3+)
PB HLTH 237C  Health Services Research Colloquium (all years)

Interdisciplinary Requirement
Two courses in one or more of the following areas:
1. Organizations and Management,
2. Politics and Policy, and/or
3. Health Economics
4. If a masters-level microeconomics course has been completed in the past, a third course from one of these specialty fields should be taken. If one has not been completed, the student should take: PP 210A,B  The Economics of Public Policy Analysis (series counts as one course).

Specialty Field Requirements
Students in the Population Health Sciences specialty field are required to take the core course and four elective specialty field courses. Students should review the most recent Population Health Sciences specialty field exam reading list early in their course planning process.

Specialty Field Core Course (1 course): PB HLTH 226C  Population Health Economics
**Specialty Field Electives (4 courses)**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DEMOG 126</td>
<td>Social Consequences of Population Dynamics</td>
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<tr>
<td>DEMOG 210</td>
<td>Demographic Methods</td>
</tr>
<tr>
<td>DEMOG 230</td>
<td>Human Mortality</td>
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<tr>
<td>DEMOG 260</td>
<td>Special Topics in Demography Seminar (varies)</td>
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<tr>
<td>DEMOG C275A</td>
<td>Economic Demography</td>
</tr>
<tr>
<td>PB HLTH 216A</td>
<td>Biological Embedding of Social Experiences</td>
</tr>
<tr>
<td>PSY 290K</td>
<td>Multidisciplinary Perspectives on the Study of Behavior Change</td>
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<tr>
<td>PB HLTH 255C</td>
<td>Mental Health &amp; Psychopathology</td>
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<tr>
<td>PB HLTH 201F</td>
<td>Community-based Research &amp; Intervention</td>
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<tr>
<td>PB HLTH 206B</td>
<td>Food and Nutrition Policies and Programs</td>
</tr>
<tr>
<td>PB HLTH 206C</td>
<td>Nutrition Epidemiology</td>
</tr>
<tr>
<td>PB HLTH 206D</td>
<td>Food and Nutrition Policies and Programs in Developing Countries</td>
</tr>
<tr>
<td>PB HLTH 210B</td>
<td>Adolescent Health</td>
</tr>
<tr>
<td>PB HLTH 217C</td>
<td>Aging &amp; Public Health</td>
</tr>
<tr>
<td>PB HLTH 253D</td>
<td>Behavior &amp; Policy Science in HIV Treatment and Prevention</td>
</tr>
<tr>
<td>PB HLTH 255A</td>
<td>Social Epidemiology</td>
</tr>
<tr>
<td>PB HLTH 255C</td>
<td>Mental Health &amp; Psychopathology</td>
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<tr>
<td>CE 264</td>
<td>Behavioral Modeling for Engin, Planning, &amp; Policy Analysis</td>
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**Research Methods (3 courses):**

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<tr>
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<tbody>
<tr>
<td>ARE 212*</td>
<td>Econometrics: Multiple Equation Estimation</td>
</tr>
<tr>
<td>ARE 213*</td>
<td>Applied Econometrics</td>
</tr>
<tr>
<td>PB HLTH 241</td>
<td>Statistical Analysis of Categorical Data</td>
</tr>
<tr>
<td>PB HLTH C242C</td>
<td>Longitudinal Data Analysis</td>
</tr>
<tr>
<td>PB HLTH 245</td>
<td>Intro to Multivariate Public Health Statistics</td>
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<tr>
<td>PB HLTH 250B**</td>
<td>Epidemiologic Methods II</td>
</tr>
<tr>
<td>PB HLTH 252D</td>
<td>Intro to Causal Inference</td>
</tr>
<tr>
<td>PB HLTH 255D</td>
<td>Methods in Social Epidemiology</td>
</tr>
<tr>
<td>EDU 274B</td>
<td>Measurement in Education and Social Sciences</td>
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<td>EDU 275G</td>
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<td>PB HLTH 252A</td>
<td>Applied Sampling</td>
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<tr>
<td>PhD BA 297B</td>
<td>Research and Theory in Business: Behavior Science</td>
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<tr>
<td>PS 235</td>
<td>Introduction to Research Design</td>
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<tr>
<td>PS C236A</td>
<td>Statistics of Causal Inference in Social Science</td>
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<tr>
<td>PSY 206</td>
<td>Structural Equation Modeling</td>
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* ARE 210 has been found to be a useful prerequisite for ARE 212, but ARE 210 does not count toward the methods requirement. Both ARE 212 and 213 are recommended for students of population health economics.

** Required of students who have not completed an advanced level epidemiologic methods course.
Health Policy PhD Examinations

SPECIALTY FIELD EXAMINATION

Students must pass a comprehensive written examination in their specialty field before they proceed to their oral examination and advance to candidacy. At the end of the second year and with all specialty field course requirements fulfilled, students will take their specialty field exam. The examination will be designed to test the core knowledge in the student’s chosen field of economics, organizations, politics, or population health. A three-member faculty committee for each student will evaluate exam performance. A non-group faculty member can serve on the committee if the faculty head of the student’s specialty field approves. The examination is four hours in length and in-class. The exam is graded high pass, pass, low pass, or fail. Students who fail the exam may be given the opportunity to retake the exam (or portions of the exam) within three months. Students are required to leave the program after two failed attempts.

The specialty field examination in health economics, organizations and management, or population health is completed after the student has completed all specialty field courses. Students normally sit for the exam at the completion of the second year of the program. All students within the same specialty field area take the same examination at the same time. The examination is written, four hours in length, in class, and generally requires the student to spend a minimum of one hour on each of three questions.

Criteria for Examination:

The specialty field examination should emphasize the students’ understanding of the major concepts, theories, and findings in their specialty field, and students must be able to apply this knowledge to the health care field. Before sitting for the exam, students should have a minimum of three courses in their specialty field, beyond the two required for the core. The criteria used to evaluate the students’ performance include:

» A sound understanding of the core knowledge of the field;
» Demonstrated ability to apply the specialty field to the health field;
» Demonstrate the potential to teach graduate level classes in the specialty field focused on health.

Specialty Field Exam Procedures and Evaluation:

The Program Manager will administer the examination on a date agreed upon by students and the specialty field faculty lead. The exam questions will be sent directly to the Manager two weeks prior to the exam date. After the exam, the Manager will send evaluation forms and the completed exams to the exam graders. Each question should have a minimum of two graders. Grading is high pass, pass, low pass, or fail for each question. A grade for the entire examination is determined by consensus among faculty graders and transmitted from the specialty field faculty lead to the Program Director. The Program Manager will provide results to the student in writing.

Students can take the specialty field examination only twice. Students who fail the exam may be given the opportunity to take the exam again within three months. Two failures will require that the student be asked to leave the program.

RESEARCH METHODS PAPER REQUIREMENT

Before the end of the third year of the program, each student must demonstrate the ability to use research methods with real data by submitting to the methods adviser a paper that uses data, as proof of competency. This could be a paper written for a class, a paper that comes from a research
project with a faculty member in which the student held a research assistant position or anything else which is acceptable to the adviser. There are no bounds set on types of methods or data used. For specific guidelines regarding the methods paper, see the next section.

The methods paper must be approved prior to student scheduling of their qualifying examination. The methods paper should be submitted to Professor Timothy Brown, the Health Policy research methods lead faculty member. This will allow ample time for the paper to be reviewed in the event that revisions are recommended. The faculty adviser will sign a form after the paper has been successfully reviewed and approved. This approval is required for all students who are preparing to take their Qualifying Exam. The final version of the methods paper must be given to the PhD Program Manager for filing. It will be included with the documents reviewed by the student’s Qualifying Exam committee.

Each PhD student must demonstrate the ability to use appropriate doctoral-level research methods by writing an empirical research paper prior to their oral qualifying examination. The final paper must be approved by the program’s research methods lead, Professor Timothy Brown. This requirement must be passed before the end of the third year of the program. The research methods paper must be approved before the student can take the oral qualifying examination. Many students use their methods paper as the foundation for their dissertation proposal.

There is considerable flexibility in the research methods paper requirement, depending on each student’s area of interest and expertise. The paper could be an independent project exploring a potential thesis topic, could build on a class term paper, could be part of a research project conducted with a faculty member or as part of a job, or anything else acceptable to the adviser and methods coordinator. There are no bounds set on types of methods or data used, however it is recommended that the student consult the adviser and methods coordinator early in the process.

The key expectations are:
» Use actual empirical data to explore an interesting question in the field of health policy.
» Use methods appropriate for a researcher trained at the PhD level.
» Write a paper of potentially publishable quality.

**Typical Structure:**
The following is an outline of the structure of a typical methods paper, although individual papers may vary considerably from this structure. Text is 10-25 double-spaced pages, 1” margins, 10-12 point font.

1. **Title page**
   Title, name, date.
   Short abstract (structured or paragraph).
   In a footnote acknowledge anyone who has made important contributions to the paper

2. **Introduction (1-2 pages)**
   Explain the broad question and motivate why it is interesting.
   Outline the hypotheses that you will be testing, and discuss how they will inform the broad question.
   Relate your paper to any important previous studies that you have built on (complete literature review not required).
3. **Conceptual framework**
   Provide a conceptual framework for considering your question, and state the exact hypotheses to be tests.

4. **Data**
   State the exact source of data. Describe the data’s population and sampling design, particularly complex survey features such as clustering and weights.
   If using a sub-sample of the data, describe the exact selection rules so that another researcher could replicate your sample in the future.
   Define each dependent and independent variable, and discuss how it is measured and transformed for analysis.
   Provide a table of summary statistics, and highlight important features of it in the text.
   Discuss missing data issues. If relevant, discuss how they will be addressed and provide a table comparing included and excluded observations (comparing samples with appropriate statistical tests).

5. **Methods**
   Describe the statistical methods that you will be using.
   If using advanced estimation techniques (beyond ordinary regression), motivate in words your alternative estimation approach, and state the strengths and limitations of each estimator. Clearly present equations illustrating the models that you will estimate (independent variables, error structure with appropriate subscripts if appropriate).
   Discuss each test that you will use to choose between models (there is no required number of tests; use the tests that are appropriate to your application).

6. **Results**
   Provide tables of results for each key model that you estimate (not just the preferred model), and in the text highlight the main results.
   Interpret the results of the specification tests, and argue which model is preferred and why.

7. **Limitations**
   Discuss each of the important limitations of your analysis, and how they might affect your results. You are not expected to have solved all potential problems, but you must thoughtfully discuss them.

8. **Discussion**
   Briefly summarize your main findings, and relate them to the hypotheses and broad questions in the introduction.

9. **References**

10. **Tables and Figures**
    All tables (followed by figures) should be attached to the end of the paper, not included in the middle of the text.
    Consult journals for sample formats (appropriate labels, avoid vertical lines in tables, etc.).

11. **Appendix**
    Include a concise program file (i.e., .do or .sas) used to generate your results. Document it with comments so that a year from now you would be able to follow it.
    If relevant, include IRB approval letter in the appendix.

12. **Response to comments**
    If this is a revised submission of the paper, include a point-by-point response to specific comments raised by the adviser or methods coordinator.
QUALIFYING EXAMINATION

Students must pass a 2-3 hour oral qualifying examination (QE) in order to advance to candidacy. All program requirements (the specialty field exam, all required coursework, and the methods paper) must be completed before the exam can be scheduled. Students should consult with the Health Policy Program Manager to ensure that the required forms are filled out and submitted for approval and signature.

Completed forms should be submitted to the Program Director along with the Graduate Division application for the Qualifying Exam for approval and signature. The Graduate Division application takes at least 4 weeks to be approved in the Degrees office. The Graduate Division requires that students submit applications with a check for $90. In addition, students must complete the CITI Course in the Protection of Human Research Subjects and include a copy of the certificate of completion with the Plan B form.

A four-member qualifying examination committee will examine the student’s knowledge in health policy, their specialty field, and the proposed area of dissertation research. The QE committee should include “inside” members from the Health Policy group faculty, and one “outside” member who must be a senate faculty member and not a member of the Health Policy Group. The QE chair cannot also serve as the student’s dissertation chair.

DISSERTATION PROSPECTUS:

The student must distribute a written prospectus of the proposed dissertation research of no more than twenty-five pages at least three weeks prior to the QE date. The main purpose of the prospectus is to clearly and convincingly demonstrate the significance of the contribution your research will make to health policy and the student’s specialty field. Significance is measured by the “publishability” of your work in reputable journals in the field. The prospectus focuses on the methodology you have selected and how you apply it in your research.

The prospectus should contain the following elements (the order of presentation is flexible):

1. Literature review
   An in-depth, concise and critical review of the relevant literature. Weakness and important gaps in the literature should be noted.

2. Theoretical or conceptual model
   A fully developed theoretical or conceptual model (e.g., the Theory of Resource Dependence, a Theory of Nonprofit Hospitals, Asset/Pricing models). The logical connection between the conceptual model and the research questions or hypothesis should be detailed.

3. Statement of research questions or hypotheses
   A statement of research question(s) and/or the hypothesis(es) to be tested.

4. Data, Methods and Analyses
   Identify the needed databases and assess their appropriateness and availability of data or your data collection strategy. Sample questionnaires or questions or documentation of existing data files should be included in appendix materials. Also include a brief description and justification of the statistical and/or econometric models and/or qualitative methods to be used.
5. Expected results
Prepare a detailed and carefully worded statement of the expected results of your research, including the significant contributions it will make, noting the journals where the research might be published.

6. Health policy implications
The health policy significance of your research and its implications for improving the organization, financing and/or delivery of health care should be clearly noted.

The prospectus should be no longer than 25 double spaced, typed pages (not including references or data appendices). The two key criteria used in grading the oral exam are:
1. the contributions it will make to the literature in the field and
2. the appropriateness of the theoretical or methodological approaches.

Grading of the Qualifying Examination is either pass or fail; a student can retake the exam only once. A second failure, however, leads to being dismissed from the program. The Program Director must sign the Graduate Division form elevating the student to candidacy. The candidate is responsible for following all Graduate Division rules and requirements for advancement to candidacy including the filing of the Application for Candidacy for the Degree of Doctor of Philosophy form (Plan B form).

IV. Health Policy PhD Dissertation

OVERVIEW
Writing and filing your doctoral dissertation is one of the final steps leading to the award of your graduate degree. Your manuscript is a scholarly presentation of the results of the research you conducted at the School of Public Health. UC Berkeley upholds the tradition that you have an obligation to make your research available to other scholars. This is done when you submit your dissertation for publishing through the ProQuest online administration system and the Graduate Division forwards your manuscript to the University Library. Your dissertation is subsequently published online in the UC-system’s scholarship repository (eScholarship) and made available within ProQuest/UMI after your doctoral degree is officially conferred by the Academic Senate.

Your Dissertation Committee supervises the intellectual content of your manuscript and your Committee Chair will guide you on the arrangement within the text and reference sections of your manuscript. For this reason, students should be selective in constituting the Dissertation Committee and Dissertation Chair.

CONSTITUTING THE DISSERTATION COMMITTEE
A three or four-person dissertation committee is selected by the student and appointed after the student has been successfully advanced to candidacy by the Graduate Division. The Program Manager must be notified of the membership of the committee.

Two of the committee members, including the chair, must be a Health Policy Faculty Group member, and the outside member must be senate faculty who is not a member of the Health Policy Group; normally the outside member of the QE committee serves in this capacity. Any change to this committee requires a form to be filed with Graduate Division and requires 2-3 weeks to be approved.
Dissertation research must be relevant to health policy and the student’s specialty field (see Dissertation Prospectus Guidelines). For completion of the PhD requirements, students must provide copies of their dissertations that follow Graduate School guidelines. An additional bound copy must be filed with the PhD program office.

**Advancement to Candidacy**

To advance to candidacy, a student must submit the Application for Advancement to Candidacy form to the Health Policy PhD Program Manager in the Student Services Office. This form should not be submitted until the final dissertation prospectus and the timeline for completion of the dissertation have been approved/signed off by the dissertation chair and the dissertation committee members. The application for candidacy must include a check in the amount of $90, made payable to the UC Regents. The advancement form should be filed no later than the end of the semester following the one in which the student passed the Qualifying Examination. Examinations more than five years old are not accepted as representing current knowledge.

When doctoral students have advanced to candidacy, the Graduate Division emails students a letter that includes information on writing a dissertation, finding financial support for research and writing, and using campus resources during this new phase of doctoral study (Graduate Degrees Office, 642-7330). Additional information regarding academic skill building workshops are available on the Graduate Division website.

Doctoral students who have advanced to candidacy for the doctorate receive a 100 percent reduction in the annual nonresident tuition for a maximum of three calendar years (calculated from the semester after which they advanced), whether registered or not. Any nonresident student who enrolls after the three-year calendar period will be charged the full nonresident tuition rate at that time.

To qualify for this reduction, the application for doctoral advancement must be received in the Graduate Services Degrees Unit by the first day of instruction of the semester for which the reduced tuition is assessed. Students who plan to file the application on the deadline day should be prepared to pay at least 20 percent of their assessed fees by the first fee payment deadline. For the reduced fee to be reflected on the CARS billing statement, however, students should apply for advancement at least 6-8 weeks before the beginning of the semester to allow sufficient processing time.

Each semester after advancement to candidacy, students should register for 12 units of independent research with their dissertation chair. The course number for independent research is Public Health 299. Your dissertation chair must send an email to the Curriculum Planner at sphcourses@berkeley.edu in order to request a Course Control Number.

**Dissertation Guidelines**

Acceptable dissertation projects will be broadly defined to reflect the historic and current interests of UC Berkeley Health Policy PhD students. The dissertation will be an original academic work that is problem or opportunity focused. The goal is to identify an important public health problem or opportunity and develop an appropriate solution or strategy.
As such, the results might be targeted at public and/or private policy makers, policy influentials, and/or program managers and corporate decision-makers with specific information to inform, improve, and revise existing policy or initiate new, needed, or especially effective policy.

Examples of dissertation research approaches include but are not limited to: examination of the health status of a group, evaluation or other critical assessment of an intervention or policy being promoted or implemented, analysis of management issues, analysis of health policy, assessment of community assets, transdisciplinary research, problem or opportunity focused theoretical contributions, histories, and methodological contributions.

Should the student and/or the student’s Dissertation Committee have any question as to whether the student’s research approach is appropriate for the dissertation, the question should be forwarded to the Health Policy PhD Program Chair for his or her opinion. If the approach is found to be an exception, a formal request for exception must be approved by the student’s Dissertation Committee and the Health Policy PhD Program Chair.

**FORMAT OF THE DISSERTATION**

The format of the dissertation will be one of three options: a standard dissertation, the three paper option, or an alternate single dissertation format acceptable to the student’s Dissertation Committee.

Option 1. A **standard dissertation** will usually incorporate the following specified content:

» Statement of the public health problem or opportunity and the resulting research question

» Critical review of the scientific literature relevant to that problem or opportunity

» Conceptual framework that includes the relevant social, scientific, economic, political, environmental, human rights, administrative, and/or cultural context

» Description of the study design or data sources and analytic methods used to answer the research question.

» Analytic results and their implications for the problem or opportunity under study

» Recommendations based on the results of the study

» Strategy for implementing and evaluating the recommendations, taking into consideration the contextual factors identified in the conceptual framework

Option 2. The **three paper option** format will include three articles of publishable quality along with (1) a separate introduction and (2) an integrative conclusions section. The three papers will be written in the format required by peer-reviewed journals identified by the student and approved by their Dissertation Committee. Dissertation Committees may require additional documentation to assess the student’s work (e.g., extended methods section). This additional work should be part of the integrating documents and not the individual articles which should be of publishable length and content. Exception may be sought to substitute an alternate product for one of the papers (e.g., DVD, website, or educational pamphlet). The exception process will include approvals by the student’s Dissertation Committee and the Health Policy PhD Program Chair.

Option 3. Alternate single dissertation formats (e.g., a book) are acceptable if approved by the student’s Dissertation Committee.
There will be no final dissertation defense. Students may be asked to present their dissertation findings in a forum sponsored by the Health Policy PhD Program either in the semester they graduate or within a year after graduating. The presentation is not a requirement for graduation.

RESOURCES
Resources to assist students with writing a dissertation:

» Copies of PhD program prospectuses and dissertations are kept on file in the Program Office in 417C University Hall. Current students may borrow copies for reference purposes.

» Dissertation Writing Partner Online Bulletin Board: grad.berkeley.edu/academic-progress/dissertation

The Graduate Division encourages students to bring copy of the dissertation to 318 Sproul Hall for a “pre-filing consult.” It is recommended that this be done this at least a couple of weeks before filing. The staff is happy to review the dissertation title page, abstract, and basic document format and will alert the student of any problems that could result in having the dissertation rejected.

FILING THE DISSERTATION
Doctoral students are required to complete two surveys before they can file their dissertation. These surveys are available at grad.berkeley.edu/academic-progress/dissertation under the “Procedure for filing your dissertation” section, in Step 4. Please take the time to complete the Survey of Earned Doctorates (SED) and the Survey of Doctoral Students’ Opinion before going to 318 Sproul Hall to file.

To file a dissertation students must be registered or on approved filing fee status for the semester in which they file. To be eligible to file a dissertation in the summer, students must enroll in Summer Sessions for a minimum of 3 units and have paid their registration fees prior to filing. Students filing in Summer Sessions will be awarded their degree in December. The current fees for Summer Sessions are accessible on the web at: summer.berkeley.edu/registration/fees.

Academic Senate regulations require that all work for a degree must be completed by the last day of the semester in which the degree is conferred. Degrees are conferred in December and in May. The last day to file a dissertation with the Graduate Division is the last day of each semester. The filing deadlines are strictly observed. To obtain the specific dates, please consult the Registrar’s web site (registrar.berkeley.edu) for the student calendar. It is strongly recommended not to wait until the last day to file.

Once the manuscript is in final form and the committee members have signed the approval page of the dissertation, the student is ready to file. The dissertation should be submitted to Graduate Services: Degrees, 318 Sproul Hall, before the end of the semester in which the degree will be conferred. The Degrees Unit will verify the student’s registration or filing fee status and check all of the submission requirements. For details see the Graduate Division website: grad.berkeley.edu/policy.