

# Public Health (PB HLTH)

## Courses

### PB HLTH 14N Healthy Communities: An Introduction to Public Health 3 Units

Terms offered: Summer 2014 10 Week Session

Public Health 14N introduces students to basic theories of community health promotion within a public health context. Using a multi-disciplinary and anti-racist approach, this course will examine selected community health topics with particular attention to systemic policies and practices and their implications for community health. Examples of selected topics that will be covered include: core theories of community health, social determinants of health, epidemiology, maternal and child health, environmental health, health policy and management, and other related public health topics. Students will be able to apply their foundational knowledge to engage in discussions about prominent issues in the field of community health.

#### Objectives & Outcomes

**Course Objectives:** 1. To introduce students to the depth and scope of issues embraced by the theory and practice of community health.

2. Provide an opportunity for students to meaningfully examine selected community health issues from a multidisciplinary perspective.

3.

Critically engage with various community health topics through an anti-racist and health equity lens.

4.

Recognize the significance of social determinants of health in achieving health equity.

#### Hours & Format

**Summer:** 8 weeks - 6 hours of lecture and 1 hour of discussion per week

#### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Grassian

### PB HLTH 15 Introduction to Global Health Equity 3 Units

Terms offered: Spring 2019, Spring 2018, Spring 2017

This seminar provides an overview of the intersection between global health and social justice, with a specific focus on the ways in which inequity, specifically the conditions that lead to poverty, disproportionately affect health outcomes. Students will learn about the historical and theoretical underpinnings of global health, how social determinants affect medical outcomes and health policy, the principles of international law and health economics, and the structure of health delivery models. In the process, students will engage in topics related to social factors that impact health, including class, race, gender, and poverty. Class discussions will address contemporary global health priorities through the lens of human rights activism.

#### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

#### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** LE

### PB HLTH 24 Freshman Seminar in Public Health 1 Unit

Terms offered: Fall 2025, Spring 2025, Fall 2024

Seminar limited to 15 freshmen led by senior faculty on broad topics in public health such as financing health care, promoting preventive behavior, controlling major public health problems such as world hunger, AIDS, drugs, and the population explosion.

#### Rules & Requirements

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

#### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of seminar per week

#### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** The grading option will be decided by the instructor when the class is offered. Final Exam To be decided by the instructor when the class is offered.

## PB HLTH 84 Sophomore Seminar 1 or 2 Units

Terms offered: Spring 2022, Spring 2020, Spring 2019

Sophomore seminars are small interactive courses offered by faculty members in departments all across the campus. Sophomore seminars offer opportunity for close, regular intellectual contact between faculty members and students in the crucial second year. The topics vary from department to department and semester to semester. Enrollment limited to 15 sophomores.

### Rules & Requirements

**Prerequisites:** At discretion of instructor

**Repeat rules:** Course may be repeated for credit when topic changes.

### Hours & Format

#### Fall and/or spring:

5 weeks - 3-6 hours of seminar per week  
10 weeks - 1.5-3 hours of seminar per week  
15 weeks - 1-2 hours of seminar per week

#### Summer:

6 weeks - 2.5-5 hours of seminar per week  
8 weeks - 1.5-3.5 hours of seminar and 2-4 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** The grading option will be decided by the instructor when the class is offered. Final Exam To be decided by the instructor when the class is offered.

## PB HLTH 98 Directed Group Study 1 - 4 Units

Terms offered: Spring 2016, Fall 2015, Spring 2015

### Rules & Requirements

**Credit Restrictions:** Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of directed group study per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

## PB HLTH 99 Supervised Independent Study 1 - 4 Units

Terms offered: Spring 2016, Fall 2015, Spring 2015

### Rules & Requirements

**Prerequisites:** Consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of independent study per week

#### Summer:

6 weeks - 2.5-10 hours of independent study per week  
8 weeks - 1.5-7.5 hours of independent study per week  
10 weeks - 1.5-6 hours of independent study per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

## PB HLTH 101 A Sustainable World: Challenges and Opportunities 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Students now attending Berkeley will confront an extremely different set of challenges than the current faculty experienced. Economic growth cannot continue exponentially in a finite world. Human activity and human numbers threaten the possibility of irreversible damage to the fragile biosphere on which all life depends. In this 3-unit interdisciplinary course, students will focus on finding creative solutions to the problems faced by their generation. Each week, experts will discuss problems and solutions concerning sustainability and climate change that they're passionate about. Topics include energy consumption, food security, population growth and family planning, migration, climate change, policy, and governance.

### Objectives & Outcomes

**Course Objectives:** Find ways to roll back the many political, social, and cultural barriers that stand in the way of developing needed, evidence-based policies and investments.

Identify those behaviors that must change, those public policies that must be put in place and the investments that must be made in order to move the current pattern of unsustainable economic activity to a biologically sustainable one.

Learn to appraise critically different and sometimes conflicting sources of information.

Propose solutions to complex interdisciplinary problems that draw on politics, economics, and philosophy and other social sciences as well as the hard sciences.

Understand how adverse trends- for example in global warming and population growth- can interact in adverse ways, sometimes with considerable rapidity.

Understand that the continued exponential growth in energy consumption and human population growth is unsustainable.

Understand the current rate of destruction of natural resources and biodiversity.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

**Instructors:** Maus, van der Walt

## PB HLTH 107 Violence, Social Justice, and Public Health 2 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2024 Second 6 Week Session, Summer 2023 Second 6 Week Session

This course addresses violence as a public health issue, using an interdisciplinary public health approach to enable undergraduate students to explore and analyze violence from personal, social, community and political perspectives. Students will learn to apply public health strategies to identify causes of violence and develop practical community-based plans to prevent violence and promote safety. This course will examine violence through the lens of the college campus, paying particular attention to the types of violence more commonly seen on, or associated with, collegiate life, and will include a term paper component.

### Hours & Format

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

**Summer:** 6 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

**Instructor:** Gamble

## PB HLTH 108 Women's Health, Gender And Empowerment 3 Units

Terms offered: Not yet offered

The course will provide core knowledge and skills from several disciplines on how to improve women's health and well-being globally, and it will follow a life course framework. It aims to expand students' understanding of the interconnected factors that influence women's health and empowerment - including foundations of sexual and reproductive health, economic development, political frameworks and global reproductive rights, demographic and social changes, basic principles of empowerment theory, educational opportunities, and efforts to ensure gender equity.

### Objectives & Outcomes

**Course Objectives:** A.[KNOWLEDGE]: To expand students' understanding of the interconnected cultural, demographic, social, and economic factors that influence women's health and empowerment globally.

B.[KNOWLEDGE]: To gain knowledge of the historical and present-day contexts of politics, policies, and laws related to women's health outcomes, human rights, sexual and reproductive rights, and gender inequities.

C.[SKILLS]: To critically engage with contrasting perspectives and changing paradigms about women's health and empowerment among epidemiologists, clinicians, public health experts, demographers, economists, human rights activists, and development specialists.

D.[SKILLS]: Assess policies, development frameworks and case studies of interventions designed to improve women's health and empowerment in differing cultural and national contexts with specific attention to gender norms.

**Student Learning Outcomes:** Analyze case studies applying the relevant historical context of politics, policies, and laws related to women's health and human rights.

Analyze the contrasting perspectives and changing paradigms among epidemiologists, public health experts, demographers, economists, human rights activists and development specialists related to women's health and empowerment

Assess the impact of women's health on advances in other sectors including child health, education, economic development, and social stability

Compare macro level political, institutional, and structural factors that influence women's health and empowerment in relation to local, cultural, and regional contexts

Critically examine how gender and women's empowerment is addressed in the Sustainable Development Goals and other development frameworks

Evaluate case studies of interventions designed to improve women's health and empowerment in differing cultural and national contexts and recommend improvements

Examine how girls' education contributes to individual, community, and national development.

Explain the ways in which social, economic, and cultural factors can both promote and impede women's and girls' health.

Identify the major institutions and non-governmental organizations that influence women's health and empowerment and suitable approaches for implementing interventions to ensure gender equity

Identify and analyze gender inequities in health care needs and access to care.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1.5 hours of lecture and 1.5 hours of discussion per week

### Additional Details

## PB HLTH 110A Introduction to Maternal, Child and Adolescent Health (MCAH) 3 Units

Terms offered: Spring 2025

An anti-racist approach to introduce students to the topic of Maternal, Child & Adolescent Health (MCAH) and to the various social and political factors that influence its current role within public health. This introductory course utilizes content from a diverse range of areas including community health, reproductive health, policy, psychology, and pediatrics. The course begins with an overview of the public health field and builds by reviewing the history of MCAH. It will then follow a life-course format, studying the roles of existing policies and public health programs in maternal and perinatal health, as well as in the pivotal developmental stages of infancy, childhood, and adolescence.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

## PB HLTH 112 Global Health: A Multidisciplinary Examination 4 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2017 First 6 Week Session, Spring 2016

This course examines health at the individual and community/global level by examining the interplay of many factors, including the legal, social, political, and physical environments; economic forces; access to food, safe water, sanitation, and affordable preventive/medical care; nutrition; cultural beliefs and human behaviors; and religion; among others. Students will be expected to read, understand, and use advanced materials from diverse disciplines. Class accompanied by case-based discussions.

### Rules & Requirements

**Credit Restrictions:** Students who complete PH N112 receive no credit for completing PH 112

### Hours & Format

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

**Summer:** 6 weeks - 6 hours of lecture and 6 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Krishnan, Reingold

## PB HLTH 115 Introduction to Global Health Equity 3 Units

Terms offered: Summer 2022 Second 6 Week Session, Summer 2021 Second 6 Week Session, Summer 2020 Second 6 Week Session

This lecture will provide an overview of the intersection between global health and social justice, with a specific focus on ways in which inequity, specifically conditions that lead to poverty, disproportionately affect health outcomes. Students will learn about historical and theoretical underpinnings of global health, how social and structural determinants affect health outcomes and policy, the principles of international law and health economics, and the structure of health delivery models. In the process, students will engage in topics related to social factors that impact health, including class, race, gender, and poverty. Class discussions will address contemporary global health priorities through the lens of human rights activism.

### Objectives & Outcomes

**Student Learning Outcomes:** Critically analyze and critique key grassroots global health advocacy efforts and models  
Formulate comprehensive and equitable policy recommendations on global health cases  
Think critically about and articulate the history, pathology, and causation of contemporary global health inequity  
Utilize basic research methods and work collaboratively in a team setting to complete a group case project

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 115 after completing PB HLTH 15. A deficient grade in PB HLTH 115 may be removed by taking PB HLTH 15.

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

**Summer:** 6 weeks - 4 hours of lecture and 3 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

## PB HLTH 116 Seminar on Social, Political, and Ethical Issues in Health and Medicine 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course offers an introduction to issues and perspectives related to health and medicine. Guest lecturers speak about the week's topic, which can include a variety of topics such as public health, violence, chronic illnesses, environmental health, and health care economics. Speakers share their first-hand experiences in their fields, discuss current issues, debate ethical dilemmas, and pose and answer questions. During the weekly discussion sections, students delve deeper into the issues, not only exploring and perhaps questioning their own thoughts and beliefs, but also learning from the experiences and perspectives of their fellow students.

### Objectives & Outcomes

**Course Objectives:** Consider various socio-economic, ethical, political, and social justice issues in health and medicine from an interdisciplinary perspective, and learn something new. This course will help students form a more comprehensive picture of what public health is and how various levels interact to impact population health. In the process, students will become better acquainted with their own beliefs, as they pertain to the issues discussed, and will learn how to productively engage in discussion with others who may or may not share these same beliefs.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam required.

**Instructors:** Francis, Keller

## PB HLTH C117 Introduction to Global Health Disparities Research 2 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

This course prepares students to conduct a 10-week global health research project in a low or middle-income country (LMIC); provides a background in global health, emphasizing infectious disease research, international research ethics, and the conduct of health research in low-resource settings. Leads students through the process of preparing for, conducting, and completing a short-term research project, with modules focused on cultural communication, the role and pace of research in these other countries, presentation preparation, project development, and troubleshooting skills; gaining perspective into the relationship between global health and health disparities in the USA

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

**Instructor:** Reingold

**Also listed as:** INTEGBI C195

## PB HLTH 118 Global Nutrition 3 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2024 First 6 Week Session, Summer 2023 First 6 Week Session

We will focus on low- and middle-income countries because they experience the greatest burden of malnutrition, and because they face a unique context of limited financial and government resources. In this course, we will discuss the effects of nutrition throughout the lifecycle in pregnancy, infancy, childhood, and adulthood. We will focus on nutrition broadly including issues of undernutrition, micronutrient deficiencies, and obesity. We will also analyze and evaluate actions taken to ameliorate the major nutritional problems facing vulnerable populations in low- and middle-income countries.

### Objectives & Outcomes

#### Course Objectives: 1.

Describe and interpret the prevalence and trends of public health nutrition issues faced by mothers and children living in low- and middle-income countries, ranging from undernutrition to overweight and obesity.

2.

Discuss the political, environmental, cultural, and socioeconomic factors underlying a wide range of nutrition issues in low- and middle-income countries and understand how interventions affect these factors.

3.

Identify the ways in which historical, social, cultural, economic, commercial, and institutional factors promote or act as barriers to the design and implementation of agriculture, food, and nutrition policies and programs, and the ways in which these policies and programs affect health and other outcomes.

4.

Integrate knowledge of nutritional issues and policy to analyze methods through which stakeholder groups affect the design and implementation of food and nutrition programs and policies.

#### Student Learning Outcomes: •

Ability to conduct a literature review of a specific public health nutritional problem using reputable sources and communicate important findings to various audiences

•

Ability to understand how pressing public health nutritional problems in low- or middle-income contexts affect different stakeholder groups;

•

Critical analysis of issues in public health nutrition relating to the context of a low- or middle-income country;

•

Understanding of the biological and social roles of nutrition in health through the life cycle, particularly as they relate to issues of poor nutrition in a global context;

### Hours & Format

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

**Summer:** 6 weeks - 8 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Zyba



## PB HLTH 124 Health Care and Public Health Management 3 Units

Terms offered: Spring 2025, Spring 2024

Examines the management of health care and public health organizations and covers organizational design, human resources, leadership, and change management competencies. Introduces management tools and techniques for monitoring and managing change within organizations. Emphasizes how leaders use data to solve problems. Case studies emphasize how to manage human relations and demands from the external environment.

### Objectives & Outcomes

#### Student Learning Outcomes: a)

Describe key priorities and challenges for health care and public health organizational leaders.

b)

Analyze health care and public health operational, financial, and quality of care data to inform organizational decision-making.

c)

Assess the tradeoffs of diverse organizational structures and designs, including divisional, functional, and matrix designs.

d)

Apply the enabling conditions for effective teams to design and facilitate high performing teams.

e)

Describe different leadership theories and how they apply to leading health care and public health organizations.

f)

Formulate strategies for the effective recruitment, engagement, and integration of effective governing and advisory boards.

g)

Analyze the key steps involved in organizational change management.

h)

Apply performance improvement and operational efficiency methods to health care and public health organizational performance problems.

### Rules & Requirements

**Prerequisites:** Junior or senior status

**Repeat rules:** Course may be repeated for credit with instructor consent.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Rodriguez

## PB HLTH 126 Health Economics and Public Policy 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course focuses on a selected set of the major health policy issues and uses economics to uncover and better understand the issues.

The course examines the scope for government intervention in health markets.

### Rules & Requirements

**Prerequisites:** Public Health major or consent of instructor

### Hours & Format

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

**Summer:** 8 weeks - 6 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Fulton

## PB HLTH 129 The Aging Human Brain 3 Units

Terms offered: Fall 2023, Fall 2021, Fall 2019

The course will survey the field of the human brain, with introductory lectures on the concepts of aging, and brief surveys of normal neuroanatomy, neurophysiology, neurochemistry, and neuropsychology as well as methods such as imaging, epidemiology, and pathology. The neurobiological changes associated with aging will be covered from the same perspectives: neuropsychology, anatomy, biochemistry, and physiology. Major neurological diseases of aging including Alzheimer's and Parkinson's disease will be covered, as will compensatory mechanisms, neuroendocrine changes with aging, depression and aging, epidemiology of aging, and risk factors for decline.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required, with common exam group.

**Instructor:** Jagust

## PB HLTH 130 Advanced Health Policy 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course will give you the opportunity to build upon your understanding of the organization, financing and current policy issues of the US health care delivery system obtained in PH 150D. In this course you will become engaged health policy analysts, applying policy making tools (e.g., policy memos/briefs, legislative analysis, regulatory comments, media advocacy, public testimony) to actual health issues and problems. Through individual and group work, you will draw upon both verbal and written communication skills to effectuate health policy change.

### Rules & Requirements

**Prerequisites:** PH 150D: Introduction to Health Policy and Management

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Flagg

## PB HLTH 132 Artificial Intelligence for Health and Healthcare 3 Units

Terms offered: Spring 2025, Fall 2023, Fall 2021

Over the coming decades, data and algorithms will transform medicine and our health care system. Whether you plan to be a physician, scientist, AI developer, or policy-maker, this course will help you understand: (1) the tremendous upside of artificial intelligence for health, and (2) how well-intentioned efforts to apply these tools can do harm.

The course will be quantitative (e.g., technical readings; problem sets requiring statistical software), and is designed for students with at least intermediate coursework in statistics, economics, computer science, etc.

### Objectives & Outcomes

**Course Objectives:** Finally, students will learn to identify new unsolved problems where data and algorithms could improve health and medicine, and start to think about developing solutions.

Students will also come away with a list of several 'red flags' -- unique challenges of health data that make it difficult to apply algorithms that have been successful in other fields. This will help them become better and more critical consumers of literature and news in this area.

Students will learn about several problems in health care where artificial intelligence is helping doctors and policy makers.

### Rules & Requirements

**Prerequisites:** An intermediate coursework in statistics (e.g., C100), economics (e.g., 100A/B), computer science (e.g., CS88), etc. is recommended

### Hours & Format

**Fall and/or spring:** 15 weeks - 1.5 hours of lecture and 1.5 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Obermeyer



## PB HLTH 142 Introduction to Probability and Statistics in Biology and Public Health 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

Descriptive statistics, probability, probability distributions, point and interval estimation, hypothesis testing, chi-square, correlation and regression with biomedical applications.

### Rules & Requirements

**Prerequisites:** High school algebra

**Credit Restrictions:** Students will receive no credit for PB HLTH 142 after completing BEHS 130A, PB HLTH 142A, or PB HLTH W142.

### Hours & Format

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

**Summer:** 6 weeks - 7.5 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Kang Dufour

## PB HLTH 142W Introduction to Probability and Statistics in Biology and Public Health 4 Units

Terms offered: Fall 2025

Descriptive statistics, probability, probability distributions, point and interval estimation, hypothesis testing, chi-square, correlation, and regression with biomedical applications.

### Rules & Requirements

**Prerequisites:** High school algebra

**Credit Restrictions:** Students will receive no credit for PB HLTH W142 after completing PB HLTH 142. A deficient grade in PB HLTH W142 may be removed by taking PB HLTH 142.

### Hours & Format

**Fall and/or spring:**

7 weeks - 8 hours of lecture per week

15 weeks - 4 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Formerly known as:** Public Health W142

## PB HLTH 147 Global Perspective on Vision 2 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

There are four facets to the course. 1) Core knowledge of the epidemiology of the major causes of vision loss globally 2) The role of ophthalmology and surgical interventions in global health 3) novel teaching methods in group dynamics, public speaking, video making, physician shadowing, surgery observation and leadership opportunities 4) Hands on public health work with an intervention, such as vision screening for the homeless. A multidisciplinary approach will be employed to study what interventions are taking place to alleviate the burden of ophthalmic disease.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Lee

**Formerly known as:** Public Health 247

## PB HLTH 150A Introduction to Epidemiology and Human Disease 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course introduces epidemiological methods with the goal of teaching students to read critically and interpret published epidemiologic studies in humans. The course also exposes students to the epidemiology of diseases and conditions of current public health importance in the United States and internationally.

### Rules & Requirements

**Prerequisites:** A course in statistics (probability, correlation and regression) preferably PBHLTH 142

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Barcellos, Mujahid, Lewnard

**Formerly known as:** 150

## PB HLTH 150B Human Health and the Environment in a Changing World 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Fall 2024

The course will present the major human and natural activities that lead to release of hazardous materials into the environment as well as the causal links between chemical, physical, and biological hazards in the environment and their impact on human health. The basic principles of toxicology will be presented including dose-response relationships, absorption, distribution, metabolism, and excretion of chemicals. The overall role of environmental risks in the pattern of human disease, both nationally and internationally, will be covered. The engineering and policy strategies, including risk assessment, used to evaluate and control these risks will be introduced.

### Rules & Requirements

**Prerequisites:** 142 and 150A recommended. May be taken concurrently

**Credit Restrictions:** Students will receive no credit for PB HLTH 150B after completing BEHS 160, PB HLTH 150, or PB HLTH N150B. A deficient grade in PB HLTH 150B may be removed by taking PB HLTH 150, or PB HLTH N150B.

### Hours & Format

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

**Summer:** 6 weeks - 8 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Bradman, Cardenas

**Formerly known as:** second half of 150

## PB HLTH C150E Urban and Community Health 3 Units

Terms offered: Spring 2025

This course will focus on the history, research methods and practices aimed at promoting community and urban health. The course will offer students frameworks for understanding and addressing inequities in community health experienced by racial and ethnic groups in the United States. The course will take a historical and comparative perspective for understanding the multiple contributors to health and disease in communities and how residents, scientists and professionals are working to improve community health.

### Rules & Requirements

**Prerequisites:** Upper Division undergraduate standing or consent of instructor

**Credit Restrictions:** Students will receive no credit for PB HLTH C150E after completing PB HLTH 150E, or CY PLAN 117AC. A deficient grade in PB HLTH C150E may be removed by taking PB HLTH 150E, or CY PLAN 117AC.

**Requirements this course satisfies:** Satisfies the American Cultures requirement

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Corburn

**Also listed as:** CY PLAN C117

## PB HLTH 150D Introduction to Health Policy and Management 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Fall 2024

This course is intended to introduce students to health policy making and health care organizations in the United States. Students will be introduced to concepts from public policy, economics, organizational behavior, and political science. Students will also be introduced to current issues in U.S. health policy and the present organization of the U.S. health care system.

### Objectives & Outcomes

#### Course Objectives: 1.

Provide an overview of the structure and financing of the U.S. healthcare system at the end of the first half of the course as measured by the midterm exam.

a.

Compare the US healthcare system to the systems in other developed countries (as measured on the final exam).

2.

Identify the principal functions of health insurance, the structure of public and private health insurance plans, and trends in enrollment and expenditures by the end of the first half of the course as measured by the midterm exam.

3.

Describe the involvement and policy goals of different stakeholders in the U.S. healthcare system measured by the midterm exam, article presentations and demonstrated in the course paper.

4.

Explain the health care policy making process in the U.S. and the respective roles of government and markets in this process. Understand the legal, ethical, economic, and regulatory dimensions of health care. To be measured by the final exam.

5.

Demonstrate critical thinking and ability to analyze health policies as demonstrated in the final term paper.

6.

Explain the socio-economic behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities, as assessed in the final exam.

a.

Comprehend the impact of structural racism on health and health care

7.

Explain the innovation and adaptation cycle in biomedical and health information technologies in the U.S health care system as measured in the final exam.

8.

Recognize the structural racism that exists within our healthcare system; consider each person's role in perpetuating the status quo in order to move towards breaking it down.

9.

Apply the concepts learned to understand health/health care crisis (i.e., COVID-19)

### Hours & Format

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

#### Summer:

6 weeks - 8 hours of lecture and 2 hours of discussion per week

8 weeks - 6 hours of lecture and 2 hours of discussion per week

### Additional Details

## PB HLTH 150E Urban and Community Health 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

This course will focus on the history, research methods and practices aimed at promoting community and urban health. The course will offer students frameworks for understanding and addressing inequities in community health experienced by racial and ethnic groups in the United States, particularly African-Americans, Latinos and Asian-Pacific Islanders. We will explore the roles of national and local policy, science and research, and cultural representations to explore the causes of structural inequalities and how racial inequalities get 'into our bodies' to influence community health.

### Rules & Requirements

**Prerequisites:** Undergraduate, upper-division standing, unless given Instructor permission

**Credit Restrictions:** Students will receive no credit for PB HLTH 150E after completing PB HLTH C150E. A deficient grade in PB HLTH 150E may be removed by taking PB HLTH C150E.

**Requirements this course satisfies:** Satisfies the American Cultures requirement

### Hours & Format

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

**Summer:** 6 weeks - 8 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Corburn

## PB HLTH N150B Human Health and the Environment in a Changing World 3 Units

Terms offered: Summer 2024 First 6 Week Session, Summer 2023 First 6 Week Session, Summer 2022 First 6 Week Session

The course will present the major human and natural activities that lead to release of hazardous materials into the environment as well as the causal links between chemical, physical, and biological hazards in the environment and their impact on human health. The basic principles of toxicology, microbial ecology, GIS, exposure assessment and risk assessment among others, are covered. The overall role of environmental risks in the pattern of human disease, both nationally and internationally, are covered. The policy strategies, used to evaluate and control these risks are discussed.

### Objectives & Outcomes

#### Student Learning Outcomes: 1.

Ability to describe the basic model of environmental health.

2.

Ability to demonstrate an understanding of environmental health sciences (EHS) core areas: toxicology, microbial ecology, GIS, exposure assessment, risk assessment and environmental epidemiology at a basic level.

3.

Demonstration of oral and written communication skills in the context of environmental health sciences.

4.

Ability to describe methods used to mitigate or control adverse health impacts from environmental hazards.

5.

Demonstrate proficiency in finding primary literature sources in search engines such PubMed and Web of Science and manage citations using Zotero or equivalent software.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH N150B after completing PB HLTH 150B, or PB HLTH 150. A deficient grade in PB HLTH N150B may be removed by taking PB HLTH 150B, or PB HLTH 150.

### Hours & Format

**Summer:** 6 weeks - 8 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Smith

## PB HLTH 155A Research Skills in Public Health and Medicine 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This applied course includes both didactic lectures (2 hours/week) and computer R labs (1 hour/week). This course will help you understand how to conduct and interpret research in human health and disease, building on your knowledge of epidemiology and biostatistics. All students will have a hands-on, guided experience analyzing data using R software during dedicated weekly R lab time.

### Objectives & Outcomes

#### Course Objectives: 1.

Develop and define a research question.

10.

Conduct case-based analysis in areas of public health and medicine.

11. Create a "Table 1" for a paper.

2.

Identify primary literature sources and managing literature citations using bibliographic management software (such as EndNote, RefWorks, or Zotero).

3.

Critically interpret information from peer reviewed medical, public health or social science literature.

4.

Clean and manage datasets.

5.

Appropriately visualize data & select appropriate statistical tests.

6.

Execute & interpret basic statistical tests in R (bivariate, non-regression).

7.

Execute & interpret regression analyses in R (bivariate & multivariate).

8.

Develop a research protocol and consent form for study of human subjects.

9.

Select appropriate laboratory, analytic, survey/questionnaire and other methods used in human research.

**Student Learning Outcomes: SKILLS:** Case-based approaches to problems relevant to human health and disease

SKILLS: Creating a data analysis plan

SKILLS: Critically reading the literature related to public health-related research

SKILLS: Developing a research protocol for human subjects

SKILLS: Developing a research question and a testable hypothesis

### Rules & Requirements

**Prerequisites:** Completion of PH 142 and PH 150A (or approval from instructors). Note, it is expected that capstone students will be 4th year graduating seniors, unless otherwise given permission to enroll by the course instructors. It is expected that capstone students will have no more than two Public Health Major core course to complete at time of enrollment

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.)

## PB HLTH 155B Women's Global Health and Empowerment 3 Units

Terms offered: Summer 2025 Second 6 Week Session, Summer 2024 Second 6 Week Session, Summer 2023 Second 6 Week Session

The course will provide core knowledge and skills from several disciplines on how to improve women's health and well-being globally. It aims to expand students' understanding of the interconnected factors that influence women's health and empowerment - including foundations of sexual and reproductive health, economic development, political frameworks and global reproductive rights, demographic and social changes, basic principles of empowerment theory, educational opportunities, and advances in gender equality.

The sessions follow a life course framework, and will be taught in a seminar style with plenty of opportunities for group discussions and case studies.

### Objectives & Outcomes

#### Student Learning Outcomes: 1.

Identify and analyze gender inequities in health care needs and access to care.

10.

Analyze the contrasting perspectives and changing paradigms among epidemiologists, public health experts, demographers, economists, human rights activists and development specialists related to women's health and empowerment.

11.

Explain the major theories of gender, sexuality and power.

12.

Demonstrate foundational knowledge of female anatomy, physiology and health conditions when discussing broader issues of women's health and empowerment.

2.

Explain the ways in which social, economic, and cultural factors can both promote and impede women's and girls' health.

3.

Examine how girls' education contributes to individual, community, and national development.

4.

Critically examine how gender and women's empowerment is addressed in the Sustainable Development Goals and other development frameworks.

5.

Evaluate case studies of interventions designed to improve women's health and empowerment in differing cultural and national contexts and recommend improvements.

6.

Compare macro level political, institutional, and structural factors that differentially influence men's and women's health and empowerment in relation to local, cultural, and regional contexts.

7.

Identify the major institutions and non-governmental organizations that influence women's health and empowerment and suitable approaches for implementing interventions to ensure gender equity.

8.

Assess the impact of women's health on advances in other sectors including child health, education, economic development, and social stability.

9.

Analyze case studies applying the relevant historical context of politics, policies, and laws related to women's health and human rights.

### Hours & Format

**Summer:** 6 weeks - 6 hours of lecture per week

### Additional Details

## PB HLTH 155C War and Public Health 3 Units

Terms offered: Summer 2025 Second 6 Week Session, Summer 2024 First 6 Week Session, Summer 2022 First 6 Week Session

Course covers global Public Health effects of war in context of war's destruction of the health care infrastructure within the Social Ecological framework. Topics include war's impact on infectious disease & as barrier to control of vaccine-preventable diseases; maternal child health; health of those displaced; psychosocial toll & environmental health consequences. Curriculum focuses on ongoing global conflicts & ramifications of U.S. wars in Iraq and Afghanistan, includes modules focusing on public health prevention approach to war & research methods for studying health outcomes in conflict zones. Students work in teams & apply the course material to a specific war that they will follow. Panel discussions to feature veterans & refugees.

### Objectives & Outcomes

**Course Objectives:** The course will provide students with a foundation on which they can build their own line of future inquiry exploring how war impacts public health.

The objectives of this course include providing students a new paradigm through which they can identify the sustained impact of armed conflict on communities, families and individuals, and understand that those effects linger long after the dead are buried or buildings are reconstructed.

**Student Learning Outcomes:** Finally, they will be able to evaluate how public health's prevention approach can be applied to armed conflict. In addition, students should be able to place the public health effects of war within the Social Ecological framework.

Moreover, upon completion of the course, students should be able to explain the effects of war on environmental health, nutrition and psychological health.

Students should also be able to explain how war can prevent control of infectious diseases, has contributed to outbreaks or re-emergence of diseases that were previously eliminated, and has prevented the eradication of vaccine preventable diseases.

Students who take the course will apply critical thought to media reports about community violence or adverse health and place them in the framework of the public health consequences of war.

The learning outcomes of the course include the ability to explain how war's destruction of the health care infrastructure impedes Public Health's mission globally — particularly in war zones in low-resource countries — and how war has also impacted Public Health in US communities.

### Hours & Format

**Summer:** 6 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Lubens

## PB HLTH C155 Sociology of Health and Medicine 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023, Summer 2018  
First 6 Week Session, Spring 2018

This course covers several topics, including distributive justice in health care, the organization and politics of the health system, the correlates of health (by race, sex, class, income), pandemics (e.g., AIDS, Avian Flu and other influenzas, etc.), and the experience of illness and interactions with doctors and the medical system.

### Rules & Requirements

**Prerequisites:** Sociology 1, 3, 3AC or consent of instructor

**Credit Restrictions:** Students will receive no credit for Sociology C115 after taking Sociology 155, Sociology C155/Public Health C155. A deficient grade in Sociology 155 may be removed by taking Sociology C115/Public Health C155.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3-3 hours of lecture and 0-2 hours of discussion per week

### Summer:

6 weeks - 7.5-7.5 hours of lecture and 0-2 hours of discussion per week

8 weeks - 6-6 hours of lecture and 0-2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Also listed as:** SOCIOL C115

## PB HLTH 155D Preparation for Public Health Practice and Leadership Seminar 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This capstone course will enhance student preparation to be effective public health practitioners and leaders through application of core knowledge, strengthening essential professional skills and development of post-graduation career and graduate education plans. Students will tackle real-world public health cases and emerging local challenges to enhance essential problem solving and innovation skills. Students will also enhance key communication, team and project skills. Through these activities, students will strengthen their ability to lead themselves, work effectively with others and lead health improvement.

### Objectives & Outcomes

**Course Objectives:** Through lecture, readings, and course activities, students will develop the capacity to:

#

Apply public health knowledge acquired in core courses to case-based scenarios.

#

Analyze the impact of a public health problem on a community/population level.

#

Develop and apply innovative approaches to addressing public health issues and present recommendations.

#

Develop interpersonal skill building, conflict resolution, and practical problem-solving skills.

#

Enhance oral and written communication and other key skills necessary for effectiveness as a professional and in demand by employers including: project management, human centered design and process improvement.

#

Increase knowledge of public health career and graduate education options and how to choose a path.

#

Prepare career-related materials. Strengthen interviewing and networking skills.

#

Strengthen effectiveness at working in teams to address public health challenges.

### Rules & Requirements

**Prerequisites:** Completion/concurrent enrollment of Public Health Major core courses: PH142, PH150A, PH150B, and P150D. Note, it is expected that capstone students will be 4th year graduating seniors, unless otherwise given permission to enroll by the Course Instructor. It is expected that capstone students will have no more than two Public Health Major core course to complete at time of enrollment

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

**Instructor:** Williams



## PB HLTH 155E Seeing People: Understanding Homelessness' Roots, Stigmas & Solutions-A Berkeley Changemaker Course 3 Units

Terms offered: Fall 2025, Fall 2023, Fall 2022

The goal is to support you as an informed citizen who understands homelessness, its roots, the multilevel systems & services that exist to address it, & the levers at each level to effect change. We will focus on developing skills to be a changemaker by working together to address homelessness & "housism" in our community. "Housism" is the belief that people experiencing homelessness are intrinsically less worthy/human. We will be informed in our growth by counter-narratives by people experiencing homelessness & by theoretical frameworks, such as the Social Determinants of Health, Critical Race Theory, Intersectionality, the Ecological Model, & theories of stigma. Students who have experienced homelessness or unstable housing are welcome.

### Objectives & Outcomes

- Course Objectives:**
1. Explain the causes of homelessness from historical, systems, and social-ecological perspectives.
  2. Discuss the roots of homelessness in the United States and in the Bay Area in systemic racism against BIPOC populations, homophobia, transphobia, and sexism.
  3. Inspect and unpack your housism and begin to develop and apply an antihousist framework.
  4. Categorize the different subpopulations of people experiencing homelessness and the unique forces leading to their vulnerability.
  5. Demonstrate the relationship between homelessness, individual wellbeing and public health.
  6. Apply changemaker principles to the goal of eliminating housism in the Bay Area.

### Rules & Requirements

**Requirements this course satisfies:** Satisfies the American Cultures requirement

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Auerswald

## PB HLTH C160 Environmental Health and Development 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The health effects of environmental alterations caused by development programs and other human activities in both developing and developed areas. Case studies will contextualize methodological information and incorporate a global perspective on environmentally mediated diseases in diverse populations. Topics include water management; population change; toxics; energy development; air pollution; climate change; chemical use, etc.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for ESPM C167 after completing ESPM 167.

### Hours & Format

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

**Summer:** 6 weeks - 6.5 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Morello-Frosch

**Also listed as:** ESPM C167

## PB HLTH 162A Public Health Microbiology 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Fall 2024

Introduction to properties of microorganisms; their relationships with humans in causing infectious diseases and in maintaining health.

### Rules & Requirements

**Prerequisites:** One year each of college-level biology and chemistry

### Hours & Format

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

**Summer:** 6 weeks - 8 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Liu



## PB HLTH 167 Applied GIS for Public Health 3 Units

Terms offered: Summer 2025 8 Week Session, Summer 2024 8 Week Session

Course is to familiarize students with principles, methods, & techniques necessary to apply GIS in public health settings. Weekly readings, discussions, case studies are presented to introduce application of GIS technologies; maps for visualizing clusters, mobile phone-Apps for data collection, & spatial analyses such as proximity analysis or site suitability. Course includes assignments aimed & acquiring experience on the use of GIS for infectious disease control, disease cluster detection, environmental justice, health services data mapping, & spatial risk assessment. Culminating project: Story Map where students use maps they've created as well as additional narrative text images & optional videos for community health education or policy

### Objectives & Outcomes

#### Course Objectives: #

Create a Story Map to convey information related to an important health issue.

#

Create a mobile-GIS tool for capturing geo-located health or asset data.

#

Know how to define, design, implement and apply spatial data to a health-related issue.

#

The ability to develop disease surveillance maps.

#

The objective of this course is to provide technical training .

#

Understand how maps relate to policies such as redlining and how those relate to current health inequities.

#

Understand the rewards and challenges of working with spatial data.

**Student Learning Outcomes:** Obtain marketable skills (eg. StoryMaps and Dashboards)

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 167 after completing PB HLTH W267. A deficient grade in PB HLTH 167 may be removed by taking PB HLTH W267.

### Hours & Format

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Smith

**Formerly known as:** Public Health 177

## PB HLTH 168 Public Health Microbiology Laboratory 2 Units

Terms offered: Fall 2023, Fall 2022

This laboratory course was designed to accompany PH162A, Public Health microbiology. The primary emphasis in the laboratory will be on properties of microorganisms, particularly those that cause infectious disease in humans. Examples will be presented of laboratory applications of microbiology and immunology as they relate to the diagnosis and treatment of disease, and control of the environment to prevent transmission of infectious agents.

### Rules & Requirements

**Prerequisites:** One year each of college-level biology and chemistry. Students are encouraged to take PH 162A concurrently or have taken it previously

**Credit Restrictions:** Students will receive no credit for PB HLTH 168 after completing BEHS 103.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2.5 hours of laboratory and 1 hour of lecture per week

#### Summer:

6 weeks - 8 hours of laboratory and 2 hours of lecture per week

8 weeks - 5 hours of laboratory and 2 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Liu

**Formerly known as:** Public Health 162L

## PB HLTH 170C Drinking Water and Health 3 Units

Terms offered: Spring 2022, Spring 2021, Spring 2020

The course covers monitoring, control and regulatory policy of microbial, chemical and radiological drinking water contaminants. Additional subjects include history and iconography of safe water, communicating risks to water consumers and a bottled water versus tap water taste test as part of the discussion on aesthetic water quality parameters. A field trip to a local water treatment plant is included.

### Objectives & Outcomes

**Student Learning Outcomes:** By the end of this course, students will be expected to:

Recognize the global occurrence of waterborne contaminants and related health impacts.

Understand water quality monitoring and control of key water quality constituents.

Appreciate the complexities of the regulatory process as it pertains to public drinking water systems in the US and abroad.

Read and synthesize published and unpublished sources of information regarding drinking water and health. Prepare a literature review in journal submission format.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Smith

## PB HLTH 177A GIS and Spatial Analysis for Health Equity 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The goal of this course is to acquire the knowledge and skills needed to approach public health problems from an equity or health justice perspective. Students will acquire mapping and spatial analysis (spatial epidemiology) skills and apply them in the context of structural inequity, health disparities, and racial justice. Geospatial skills are applied to public health problems that demonstrate differences in health exposures, risks, and adverse outcomes for BIPOC or economically disadvantaged individuals living in the US as well as those in low and medium income countries as compared to high income countries.

### Objectives & Outcomes

**Course Objectives:** Communicate information related to an important health issues including their geographic and demographic contexts.

#How: Create a Dashboard of health data

# How: Use the ESRI StoryMap Builder to incorporate short narratives, maps, infographics, and images into a web-based interactive communication tool.

Demonstrate the ability to design, implement, and apply spatial data to determine and display relative prevalence of diseases.

# How: Create maps and perform kernel density and cluster/hot spot analysis for a specific disease

# How: Create a dashboard to illustrate the location and incidence of disease cases

Illustrate how maps were used to contribute to structural racism by relating historic redlining maps to current health inequities.

# How: Create a social vulnerability index from demographic and health indicators, and map the index by county

# How: Compare a current map that illustrates social vulnerabilities to historic redlining maps from the Federal Housing Administration.

Illustrate the limitations of political boundaries (census areas, cities, counties), in predicting disease prevalence, and equity issues associated with health risks.

# How: Use appropriate classification schema to overcome the "Modifiable Areal Unit Problem"

Predict concentrations of an environmental contaminant where data are missing

# How: Use Kriging to interpolate values in an area that has some missing data.

Report survey data cartographically.

# How: Develop and execute a geo-enabled survey on a public health issue

# How: Create an interactive map of survey results

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 177A after completing PB HLTH 277A. A deficient grade in PB HLTH 177A may be removed by taking PB HLTH 277A.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1.5 hours of lecture and 3 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Smith

## PB HLTH 180 The Evolution of Human Sexuality 2 Units

Terms offered: Fall 2023, Spring 2023, Fall 2022

This course is built around an evolutionary perspective of the basis of human mating behavior and explores a variety of topics in human sexuality with the goal of helping us to understand ourselves and to understand and accept the behavior of others. The course takes examples from art, sociology, anatomy, anthropology, physiology, contemporary politics, and history to explore the richness of human sexual behavior and reproduction and the interaction between our biology and our culture.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Potts

## PB HLTH 181 Poverty and Population 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Globally one million more births than deaths occur every 112 hours, 90% in the poorest countries. Between 1960 and 1980, considerable attention was focused on rapid population growth. Afterwards, the attention has faded and investment in family planning evaporated. Family size among some of the poorest women is increasing. This course seeks to provide an understanding of the relationships between population growth, poverty, women's autonomy, and health. It explores the political "fashions" underlying changing paradigms among demographers, and economists, and development specialists.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Campbell, Potts, Prata

## PB HLTH 182 Sexual Health and Sexuality 3 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

This course takes examples from biology, sociology, anatomy, anthropology, art, physiology, contemporary politics, and history to explore the richness of human sexual behavior and is designed to enable students to engage in critical thinking and problem solving and other means of inquiry in relation to their sexual selves. The course encourages students to make informed sexual decisions and to be aware of the bio-medical, cultural, sociological, psychological, and public health education aspects of their sexuality. Responsible sexual decision making is based not only on accurate information but also on carefully evaluating information and considering one's own values.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 182 after completing PB HLTH 180, or PB HLTH 182. A deficient grade in PB HLTH 182 may be removed by taking PB HLTH 180, or PB HLTH 182.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Mills

## PB HLTH 188 Fung Fellowship Seminar 3 Units

Terms offered: Fall 2024, Spring 2023, Fall 2022

This course explores the development of innovations to improve the health of populations, with a primary focus on technologies for children (ages 0 to teen) and older adults. Significant emphasis is placed on health equity in exploring these customer groups. Human-centered design is used as the overarching approach to problem solving, which contributes mindsets and skills, as well as mechanisms for collaboration. This course is part of the Fung Fellowship for Wellness & Technology Innovations.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit with instructor consent.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Sandhu

## PB HLTH H195A Special Study for Honors Candidates in Public Health 3 Units

Terms offered: Fall 2021, Spring 2019, Fall 2017

Required for students intending to complete an honors thesis in their senior year. This course will document your completion of an senior honors thesis in Public Health. You will focus on writing and publishing scientific documents and presenting scientific information in mixed media (written and oral) to diverse audiences (scientists and the general public).

### Hours & Format

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

### Summer:

6 weeks - 7.5 hours of independent study per week

8 weeks - 5.5 hours of independent study per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

## PB HLTH 196 Special Topics in Public Health 1 - 4 Units

Terms offered: Spring 2023, Spring 2022, Fall 2021

Special topics in various fields of Public Health. Topics covered will vary from semester to semester and will be announced at the beginning of each term.

### Rules & Requirements

**Prerequisites:** Upper division standing

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of lecture per week

### Summer:

6 weeks - 1-10 hours of lecture per week

8 weeks - 1-8 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

## PB HLTH 196A Special Topics in Public Health 1 - 2 Units

Terms offered: Spring 2025

Special topics in various fields of Public Health. Topics covered will vary from semester to semester and will be announced at the beginning of each term.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes. Students may enroll in multiple sections of this course within the same semester.

### Hours & Format

**Fall and/or spring:**

8 weeks - 1-5 hours of lecture per week

8 weeks - 1-5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

## PB HLTH 197 Field Study in Public Health 1 - 4 Units

Terms offered: Fall 2025, Fall 2023, Spring 2023

Supervised experience relevant to specific aspects of public health in off-campus organizations. Regular individual meetings with faculty sponsor and written reports required.

### Rules & Requirements

**Prerequisites:** Upper division standing

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of independent study per week

### Summer:

6 weeks - 1-10 hours of independent study per week

8 weeks - 1-8 hours of independent study per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

## PB HLTH 198 Directed Group Study 1 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of directed group study per week

### Summer:

6 weeks - 1-4 hours of directed group study per week

8 weeks - 1-4 hours of directed group study per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

## PB HLTH 199 Supervised Independent Study and Research 1 - 4 Units

Terms offered: Summer 2023 8 Week Session, Spring 2023, Spring 2022

Enrollment restrictions apply; see the Introduction to Courses and Curricula section of this catalog.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of independent study per week

### Summer:

6 weeks - 1-4 hours of independent study per week

8 weeks - 1-4 hours of independent study per week

### Additional Details

**Subject/Course Level:** Public Health/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

## PB HLTH 200 Foundations of Public Health Practice 1 Unit

Terms offered: Fall 2025, Fall 2024, Fall 2000

Today, graduates of public health programs must be prepared for evidence-based practice and the generation of practice-based evidence.

They must have the ability to work in an increasingly interdisciplinary, interprofessional and cross-sectoral environment and settings.

Foundations of Public Health Practice introduces 12 areas of critical public health content to bridge the chasm between public health practice and theory. This course serves as an orientation to the various subjects, fields, and concepts that students will encounter in their education. While no single professional is expected to be an expert in all of these practice areas, everyone must be aware of their importance.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 200 after completing PB HLTH 200. A deficient grade in PB HLTH 200 may be removed by taking PB HLTH 200.

### Hours & Format

**Fall and/or spring:** 8 weeks - 1 hour of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Maus, Barnett

**Formerly known as:** Public Health W200

## PB HLTH 200A Current issues in Public Health Ethics: Research and Practice 3 Units

Terms offered: Spring 2018, Spring 2017, Spring 2016

This course seeks to examine the ethical challenges inherent in public health practice, research, and policy. It covers a range of topics in ethics through cases representative of different public health dilemmas. The cases considered include treating homeless people with TB, rationing medical care in the United States, conducting HIV studies of maternal-fetal transmission in Africa, managed care policies and setting priorities, the deaf community and cochlear implants, and the societal implications of genetic information. The goal is to enable students to develop an analytical methodology that has practical application for their future work.

### Rules & Requirements

**Prerequisites:** Graduate standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Halpern

## PB HLTH 200EW Health Policy and Management Breadth Course 3 Units

Terms offered: Summer 2025 First 6 Week Session

Health policy and management applies concepts from economics, organizational behavior, and political science to the structure, financing, and regulation of the public health and health care delivery systems. This breadth course is designed to give MPH students a basic set of competencies in the domains central to the field.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W200E after completing PB HLTH 200E. A deficient grade in PB HLTH W200E may be removed by taking PB HLTH 200E.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 6 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Fulton

**Formerly known as:** Public Health W200E

## PB HLTH 200FW Environmental Health Sciences Breadth Course 2 Units

Terms offered: Fall 2025

This survey course covers the breadth of hazards from chemical, biological, and physical agents of concern to environmental health professionals. Lectures are presented by experts on particular topics that emphasize the activities involved in professional practice.

### Objectives & Outcomes

**Course Objectives:** Communicate environmental health issues to lay public and professionals, using appropriate terminology and data. Define and describe major ways in which the environment and human health are linked in different parts of the world and for different populations. Develop a case study on an environmental health and justice issue and propose solutions that integrate the main components of environmental health (exposure assessment, toxicology, epidemiology, and risk assessment).

Define and describe the key components of environmental health, including exposure assessment, toxicology, epidemiology, and risk assessment.

Describe ways by which the health impact from major environmental health risks, such as climate change, can be effectively controlled.

Learn effective ways to communicate important information in Environmental Health

Learn the concepts of environmental justice, water sanitation and hygiene (WASH), health risks associated with disasters, food systems, and public health.

Understand the associated health effects from developmental, adult and occupational chemical exposures.

### Hours & Format

#### Fall and/or spring:

7 weeks - 4 hours of lecture per week

15 weeks - 2 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Graham, Pokhrel

**Formerly known as:** Public Health W200F

## PB HLTH 200GW Health and Social Behavior Breadth 3 Units

Terms offered: Fall 2025

Course focuses on social, cultural, bio-behavioral determinants of health & health behavior, issues related to social & behavioral interventions, policies aimed at improving community & population health. Students will have experience in/be able to apply range of Health & Social Behavior perspectives, approaches to critically analyze public health issues, conceptualize research & interventions at different levels of ecological model. Topics designed to convey key concepts, highlight approaches in Health & Social Behavior via lectures, readings, videos & online resources. Group assignments focus on community context & health. Will require students to synthesize/apply concepts from course. Assignments will culminate in a final group project.

### Objectives & Outcomes

**Course Objectives:** Describe a range of major themes, theories and conceptual frameworks, research and practice approaches commonly encountered in Health and Social Behavior. Describe and apply ecological public health frameworks and concepts emphasizing multilevel interactions between biology, behavior, environments and the distribution of life opportunities. Describe the rationale for community involvement in public health actions and the key principles of community-based approaches to public health. Understand how socially constructed concepts of race, ethnicity, immigration, gender and social class influence health and structure population health inequities. Understand relationships between human behavior and public health to critically assess models of human behavior and to explore strengths-based, multi-level intervention design.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W200G after completing PB HLTH 200L, or PB HLTH 200G. A deficient grade in PB HLTH W200G may be removed by taking PB HLTH 200L, PB HLTH 200L, or PB HLTH 200G.

### Hours & Format

#### Fall and/or spring:

7 weeks - 6.5 hours of lecture per week  
15 weeks - 3 hours of lecture per week

**Summer:** 6 weeks - 7.5 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** vanDommelen-Gonzalez

**Formerly known as:** Public Health W200G

## PB HLTH 200J Health Policy and Management Breadth Course 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Health policy and management applies concepts from economics, organizational behavior, and political science to the structure, financing, and regulation of the public health and health care delivery systems. This breadth course is designed to give MPH students a basic set of competencies in the domains central to the field.

### Objectives & Outcomes

#### Course Objectives: #

Compare the organization, structure, and functions of health care, public health, and regulatory systems across US and selected international settings;

#

Critically evaluate the role that structural racism plays in the US healthcare system; and

#

Identify the core functions of public health and the essential services that together comprise public health;

#

Identify the principal functions of health insurance, the structure of public and private health insurance plans, and trends in enrollment and expenditures;

#

Understand and be able to discuss dimensions of the policy-making process, including the roles of ethics and evidence;

#

Understand and explain basic principles and tools of finance, budgeting, and resource management;

#

Understand the drivers of innovation in preventive, diagnostic, and therapeutic technologies;

#

Understand various barriers to healthcare access, and discuss potential strategies to mitigate these challenges

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bertozzi

**Formerly known as:** Public Health 200C1



## PB HLTH 200K Environmental Health Sciences Breadth Course 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course will give an introduction to the major human and natural activities that lead to release of hazardous materials into the environment as well as the causal links between chemical, physical, and biological hazards in the environment and their impact on human health, including those related to climate change. The basic principles of toxicology, exposure assessment, risk assessment, risk perception, and environmental health policy will be presented. The overall role of environmental risks in the pattern of human disease, both nationally and internationally, will be covered.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Kyle

**Formerly known as:** Public Health 200C2

## PB HLTH 200L Health and Social Behavior Breadth 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Health and social behavior uses theory and research from the behavioral sciences to explain the causes and health effects of salutary and risky behavior.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Catalano

**Formerly known as:** Public Health 200C3

## PB HLTH 201E Public Health Interventions: Theory, Practice, and Research 2 or 3 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

This course focuses on the primary factors that affect health and the interventions that can promote health. Students examine the determinants of health and the theory, history, types, ethics, and approaches of public health interventions. Community level interventions and multidisciplinary approaches receive special emphasis. The course stresses a rigorous critique of the outcomes of interventions and practical ways to improve them. Students take an active role in the design and conduct of the course.

### Rules & Requirements

**Prerequisites:** Previous experience with health interventions and doctoral student status or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Neuhauser, Syme

## PB HLTH 202B Ethnic and Cultural Diversity in Health Status 4 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

Focus on ethnic and cultural diversity in health behavior as a basis for public health programs. Consideration of U.S. ethnic minority groups and cultural groups in non-Western societies. Health status and behavior examined in context of relevant social and anthropological theory (social class, acculturation, political economy). Influence of socio-cultural background on concepts of health, illness, and health-seeking behavior. Implications for planning public health programs and policies.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Morello-Frosch

## PB HLTH C202B Ethnic and Cultural Diversity in Health Status 4 Units

Terms offered: Fall 2025, Spring 2025, Spring 2024, Spring 2016

Focus on ethnic and cultural diversity in health behavior as a basis for public health programs. Consideration of U.S. ethnic minority groups and cultural groups in non-Western societies. Health status and behavior examined in context of relevant social and anthropological theory (social class, acculturation, political economy). Influence of socio-cultural background on concepts of health, illness, and health-seeking behavior. Implications for planning public health programs and policies.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Morello-Frosch

**Also listed as:** ESPM C254

## PB HLTH 202G Advanced Alcohol Research Seminar 1 Unit

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course is an advanced alcohol research seminar in which presentations are made by alcohol research scientists nationally and internationally, as well as pre-and post-doctoral fellows, and focus on special topical areas related to psychosocial research in the field each semester. Areas covered include the epidemiology of drinking patterns and alcohol-related problems, issues related to treatment of alcohol-related problems, and health services research. Guest presentations are also provided (related to topics outside psychosocial research) to provide a breadth of understanding in the field. The seminar also includes sessions focused on methodological issues in alcohol-related research and grant writing, and has a research ethics component covering a number of sessions.

### 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:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Cherpitel, Kaskutas

## PB HLTH 202L Critical Theory and Social Science Methods 3 Units

Terms offered: Fall 2024

Social science research on identity and vulnerable populations is at a critical moment. This course will examine the tension between theoretical and empirical research and its adverse impact on social science research. It will explore ways to develop methodological approaches to race and other markers of human difference that blend traditional empirical methods with critical theoretical traditions, e.g. critical race theory, feminist theory, disability theory, queer theory, and others. Emphasis will be placed on understanding the implications of this tension between theory and methods for research in the health sciences.

### Objectives & Outcomes

**Course Objectives:** 1. Understand the limitations of contemporary social science research on race and other identity traits such as gender, sex, sexuality, and disability.

2. Understand the significance of the “firewall” between theory and method in social science research and how it can lead to less than robust understandings of the social world and health outcomes.

3. Understand the contributions that critical theoretical traditions can make to empirical research – especially in the health sciences.

4. Be able to design a social science research project that reflects traditional empirical methods and critical theoretical insights.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## PB HLTH 202W Ethnic and Cultural Diversity in Health Status 3 Units

Terms offered: Not yet offered

This course will examine ethnic and cultural differences in health status and behavior among historically marginalized communities in the United States, including African-Americans, Latinos, Asian-Americans, Native Americans, as well as sexual minorities and groups from non-Western societies.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W202 after completing PB HLTH 202. A deficient grade in PB HLTH W202 may be removed by taking PB HLTH 202.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Morello-Frosch

**Formerly known as:** Public Health W202

## **PB HLTH 203A Theories of Health and Social Behavior 3 Units**

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course provides a survey of theoretical perspectives and their application in analyzing the behavioral, social, and cultural dimensions of community health problems. An emphasis is placed on critically examining the strengths and weaknesses of particular theories for understanding and addressing complex community health problems.

### **Rules & Requirements**

**Prerequisites:** Background in social and behavioral sciences. Consent of instructor

### **Hours & Format**

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

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Holmes

## **PB HLTH 204A Mass Communications in Public Health 3 Units**

Terms offered: Fall 2025, Fall 2024, Fall 2023

Examines the role of mass communication in advancing public health goals. Reviews mass media theories in general, and theories of the news media in particular. Provides an in-depth understanding of media advocacy as a strategy for using news media and paid advertising to support policy initiatives at the local, state, and federal levels. Examples are drawn from a wide range of public health issues.

### **Rules & Requirements**

**Prerequisites:** Graduate standing or consent of instructor

### **Hours & Format**

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

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## **PB HLTH 204G Research Advances in Health Disparities: Multidisciplinary Perspectives 1 - 3 Units**

Terms offered: Fall 2024, Fall 2023, Fall 2022

Understanding and addressing persistent racial inequities in health status is a core public health problem. Ethnic minorities are much more likely to experience much higher rates of poor birth outcomes, infant mortality, infectious and chronic diseases, hospitalization rates, and early death rates from all causes. This course examines racial and ethnic health inequities as a function of social inequality. Topics are drawn from a social determinants of health framework emphasizing the importance of the economic, social, and political features that adversely affect the health status of many underrepresented racial and ethnic minorities in the U.S. from a multidisciplinary approach: Public Health, sociology, anthropology, and social welfare

### **Rules & Requirements**

**Prerequisites:** Graduate standing or consent of instructor

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 2-4 hours of seminar per week

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Herd

## PB HLTH 204W Human Centered Design in Public Health 3 Units

Terms offered: Summer 2025 Second 6 Week Session

This course explores the use of human centered design to drive tangible change in public health settings and introduces design thinking: a process of identifying, creating, and implementing creative solutions. Students will explore the role of design thinking in context. Learned methodologies enable students to discover users' needs; synthesize complex information; identify direction for design and communication; generate ideas; and prototype, test, and communicate solutions. Most importantly, this course will support students thinking creatively when addressing public health problems, employing methods and techniques that are focused on idea generation and innovative solution building in service of creating a better world.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W204 after completing PB HLTH 204. A deficient grade in PB HLTH W204 may be removed by taking PB HLTH 204.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Lo

**Formerly known as:** Public Health W204

## PB HLTH 205 Program Planning and Needs Assessment 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

This course provides the necessary skills to plan effective public health programs. Examines principles and methods underlying program planning, emphasizing multi-disciplinary, collaborative and "real world" planning processes. Provides students with conceptual and experiential understanding of how to plan, conduct and present community health needs assessments by covering both theory and practical skills. Students will become familiar with the theory and methods related to ecologically valid assets-based and needs-based community health assessments and translate them into practice. Students will work with a community organization to apply the program planning principles and needs assessment taught throughout the course.

### Objectives & Outcomes

**Course Objectives:** Students will work in a community organization to apply the knowledge and skills acquired in this class. Real world application of program planning principles and needs assessment will be taught throughout the course. Students will complete this course with the development of a complete program plan for a community organization or collect, analyze and present community health assessment data and develop feasible programmatic recommendations.

### Rules & Requirements

**Prerequisites:** Public health students

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Ndola, Prata

## PB HLTH 205W Program Planning and Development 3 Units

Terms offered: Summer 2025 Second 6 Week Session

The purpose of this course is to provide students with the necessary skills to plan health programs. We will examine the principles and methods underlying program planning. Multi-disciplinary, collaborative planning will be emphasized. Program planning applications will be emphasized throughout the course by using case studies, specific illustrations, and online planning exercises.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W205 after completing PB HLTH 205. A deficient grade in PB HLTH W205 may be removed by taking PB HLTH 205.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** O'Hara

**Formerly known as:** Public Health W205

## PB HLTH 206 PH Nutrition Core Course: Critical Issues in Public Health Nutrition 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will introduce first-year public health nutrition and other MPH students to critical issues in public health nutrition, and provide them with critical thinking skills to analyze these issues using scientific literature. Students will build group facilitation skills, library research skills, and professional advocacy skills. Second-year public health nutrition students and a panel of PHN graduates will speak to the students about valuable skills and competencies needed for work in public health nutrition.

### Rules & Requirements

**Prerequisites:** Master of Public Health students

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Fernald

## PB HLTH 206AW Nutrition Assessment 3 Units

Terms offered: Not yet offered

Nutrition assessment tools are used to evaluate an individual's or population's nutrition status and/or risk of specific nutrient excess or deficiency. This 3-unit course will discuss various dietary, anthropometric, clinical, and biochemical nutrition assessment tools and provide you with skills to determine which assessment tools are needed based on program/research project goals, how to interpret nutrition assessment survey results and apply them to populations, and critically evaluate the metrics used to define different types of malnutrition.

### Objectives & Outcomes

**Course Objectives:** 1. Recommend the appropriate nutrition assessment tool needed based on the target population, nutrient/ nutrition issue of interest, and goal of the assessment.

2.

Critically evaluate nutrition assessment tools based on their required resources, applications, limitations, and biases.

3.

Interpret nutrition assessment results and apply them at the population level.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 206AW after completing PB HLTH 206A. A deficient grade in PB HLTH 206AW may be removed by taking PB HLTH 206A, or PB HLTH 206A.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Zyba

**Formerly known as:** Public Health W206A

## PB HLTH 206B Food and Nutrition Policies and Programs 3 Units

Terms offered: Fall 2024, Spring 2024, Spring 2023

This course examines the historical origins of food and nutrition improvement programs in the United States, including the political and administrative conditions that led to the development of these programs. It also examines the goals, design, operations, and effectiveness of some of these programs: Food Stamp Program, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the National School Lunch Program, the School Breakfast Program, Head Start, the Child Care Food Program, and the Elderly Nutrition Program.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

**Summer:** 3 weeks - 15 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Fernald

## PB HLTH 206BW Food and Nutrition Policy 3 Units

Terms offered: Fall 2025

Course examines ways in which the US govt designs & implements policies/programs that affect access to nutritionally adequate, safe, affordable diets. We analyze how multiple stakeholders in the food system interact to affect policy design & implementation; historical, social, economic, environmental & political factors that determine stakeholder positions on policy issues; & ways these factors promote or act as barriers to achieving a system that promotes optimal food access, nutrition & health. We cover contemporary food & nutrition policy issues, as well as the history of these issues & ideas. Students will understand the broad spectrum of policies that affect human diets & will become familiar with the policy processes.

### Objectives & Outcomes

#### Course Objectives: a.

Describe the principal areas of domestic food and nutrition policy (e.g., food assistance, dietary guidance and education, agricultural support, food industry regulation, food safety regulation, food and nutrition research) and the most important current issues related to these policy areas.

b.

Identify the governmental agencies primarily responsible for each area of food and nutrition policy and explain their roles.

c.

Identify the ways in which historical, social, cultural, economic, commercial, and institutional factors promote or act as barriers to the design and implementation of agriculture, food, and nutrition policies and programs, and the ways in which these policies and programs affect health.

d.

Describe the major federal food programs—their history, purpose, reach, and effectiveness, as well as current policy and political questions being raised about them.

e.

Identify and apply the methods through which stakeholder groups affect the design and implementation of agriculture, food, and nutrition policies.

f.

Recognize your potential to engage in and influence food and nutrition policy throughout your career.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W206B after completing PB HLTH 206B. A deficient grade in PB HLTH W206B may be removed by taking PB HLTH 206B, or PB HLTH 206B.

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

**Fall and/or spring:** 8 weeks - 7 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Thompson

**Formerly known as:** Public Health W206B

## PB HLTH 206C Nutritional Epidemiology 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course develops the ability to read published nutritional epidemiology research critically. Basic research methods in nutritional epidemiology will be reviewed, and issues in design, analysis, and interpretation unique to nutritional epidemiology will be addressed. This will be accomplished by readings and study questions, lecture/discussions, and problem sets.

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

**Summer:** 8 weeks - 15 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Block

## PB HLTH 206D Programs and Policies in Global Nutrition 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course will use a case-based approach to examine the ways in which governments in developing countries design and implement policies and programs that affect food production and access to safe, affordable, and nutritionally adequate diets. In the course we will analyze, assess and evaluate ways to take action to ameliorate the major nutritional problems facing vulnerable populations in developing countries.

### Objectives & Outcomes

#### Course Objectives: #

Critical analysis of issues in public health nutrition relating to the context of a developing country;

#

Demonstration of effective organizational skills and the ability to communicate with and enlist the support of potential participants and stakeholders; and

#

Participation in making policy related to health and nutrition within services, programs, and projects.

#

Understanding of the biological and social roles of nutrition in health, particularly as they relate to issues of poor nutrition in a global context;

#### Student Learning Outcomes: 1.

Describe and interpret the prevalence and trends of public health nutrition issues faced by mothers and children living in low- and middle-income countries, ranging from malnutrition to micronutrient deficiencies to overweight and obesity.

2.

Discuss the political, environmental, cultural, and socioeconomic factors underlying a wide range of nutrition issues in low- and middle-income countries and predict how interventions affect these factors.

3.

Identify the ways in which historical, social, cultural, economic, commercial, and institutional factors promote or act as barriers to the design and implementation of agriculture, food, and nutrition policies and programs, and the ways in which these policies and programs affect health and other outcomes.

4.

Integrate knowledge of nutritional issues and policies to analyze methods through which stakeholder groups affect the design and implementation of food and nutrition programs and policies.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Fernald



## PB HLTH 207 Transforming the Food System: From Agroecology to Population Health 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will take a solutions-oriented approach to addressing the pressing problems in current food systems. We will explore strategies used by the disciplines of agroecology, policy, law, public health, and business in working to improve food systems and apply their varied approaches to real-world case studies. Through weekly readings, discussions, and problem-solving sessions with Berkeley's leading food systems experts, students will gain a broad understanding of food systems and the leverage points that can be targeted to improve the health of people and the planet.

### Objectives & Outcomes

#### Course Objectives: 1.

Define and explain food systems, explain interdependence within those systems, and understand their impacts on the health of people and the planet

2.

Identify leverage points for transforming food systems based on evidence

3.

Understand various strategies—legal, political, agro-ecological, economic, behavioral, etc.—that different disciplines use to target leverage points

4.

Articulate different perspectives on food systems issues and explain the pros and cons of strategies for food systems change

5.

Adapt communication styles to various audiences and media

### Rules & Requirements

**Prerequisites:** Graduate student standing

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Madsen

## PB HLTH 207A Public Health Aspects of Maternal and Child Nutrition 2 or 3 Units

Terms offered: Fall 2024, Fall 2023, Fall 2022

Nutrition plays a vital role in human reproduction and child growth and development. This course provides an overview of the major nutritional issues faced by women of childbearing age, infants, children, and adolescents in the United States and around the world, with selected topics explored in greater depth. Nutritional problems are multi-factorial and occur at multiple levels and we will study them from a variety of viewpoints (biological, psychological, socio-cultural, economic, political, and behavioral) as well as from individual and population perspectives. Participants in the course will become acquainted with nutritional research, policies, and interventions designed to enhance reproduction, growth, and development. This course will also explore health disparities in maternal and child nutrition in both a domestic and international context.

### Rules & Requirements

**Prerequisites:** Course in epidemiology required; previous coursework in biology and nutritional science highly recommended

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Abrams

## PB HLTH 207AW Maternal and Child Health Nutrition 3 Units

Terms offered: Fall 2025

Nutrition plays a vital role in human reproduction and child growth and development. This course covers core principles of nutrition and health and provides an overview of the major nutritional needs and issues faced by women of reproductive age, infants, children, and adolescents in the United States and globally, with selected topics explored in greater depth. This course will also explore disparities in various health outcomes related to MCH nutrition and provide students the opportunity to apply the course concepts at a personal and programmatic level.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W207A after completing PB HLTH 206, or PB HLTH 207A. A deficient grade in PB HLTH W207A may be removed by taking PB HLTH 206, PB HLTH 206, or PB HLTH 207A.

**Repeat rules:** Course may be repeated for credit under special circumstances: if student receives D or F grade

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Zyba

**Formerly known as:** Public Health W207A

## PB HLTH 209A Introduction to Plant-Centric Food Systems 1 Unit

Terms offered: Spring 2023, Spring 2022

This is an energizing and exciting symposium that explores the robust opportunities and accompanying challenges of plant-forward solutions. The gathering is convened to underscore the urgency of shifting to plant-based diets for healthier, more equitable, and resilient food systems and to explore how students will play a pivotal role in the transformation of the food system. Plant Futures is the first program at UC Berkeley to feature in depth multidisciplinary conversation aimed at exploring the role and importance of plant-based foods as a critical lever for change, and provides a unique opportunity for students to directly connect to prominent leaders, creators and influencers and forge pathways for future professional engagement.

### Objectives & Outcomes

#### Course Objectives: 1.

Deepen students' knowledge of the impacts of our diets and current food production systems on personal health and planetary boundaries that directly drive climate change by understanding the urgent challenges and most critical levers for transformation in food systems.

2.

Build critical systems thinking competencies at the intersection of agriculture, nutrition, climate science, behavioral science, economics, entrepreneurship and ethics with plant-centric food systems.

3.

Provide a multisectoral opportunity for students to build community and connect with leaders in different disciplines working in the plant-based sector through networking opportunities that converge the scientific, business, and academic communities.

4.

Create an opportunity for students to engage and directly collaborate with food industry business leaders, experts, and researchers working on the forefront of innovation and sustainability, specifically in the plant-based sector.

5.

Provide students with frameworks, examples and skill sets to design and implement innovative plant-centered food systems that are sustainable and driven by public health principles.

6.

Equip students with the foundation and tools to become advocates and change makers for plant-centered food systems in their personal lives, on campus, and beyond. Ultimately, prepare students at a personal and professional level to accelerate the transition to a healthy, sustainable and just food system.

### Hours & Format

**Fall and/or spring:** 1 weeks - 20 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Rosenzweig

## PB HLTH 209B Plant Futures Challenge Lab 3 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

A collaborative, multidisciplinary applied learning journey in systems entrepreneurship, ethical leadership and innovation models intended to accelerate the transition to a healthy, sustainable and just food system.

### Objectives & Outcomes

#### Course Objectives: 1.

Develop systems-thinking and analysis capabilities while developing 'food-systems intelligence' and 'triple-bottom line' business design capabilities. Understand the complex interdependencies and trade-offs involved in solving food systems challenges.

2.

Develop an understanding of mission-driven organizational strategies and practices, based on clear ethical principles.

3.

Combine and apply entrepreneurial skill sets, mind sets and tool sets needed for leadership, team building, and initiating and managing innovative change. Learn to transform an idea into a tangible, viable plan of action.

4.

Learn to recognize and "size" unmet needs, issues, and opportunities in the food system and apply creativity, research, and discipline to create the type of solutions that make meaningful, lasting impacts.

5.

Expand your personal capacities for collaboration while reaching out of your comfort zone by contacting and enrolling experts who can assist your project.

6.

Lead and collaborate with other students from different disciplines across the University to apply the team building strategies and leadership necessary to develop a plant-forward solution to solve complex food systems challenges.

7.

Grow and cultivate your professional network and experience by building deep relationships with mentors and professional allies.

8.

Develop, through practice, the foundation and tools needed to become advocates for plant-forward solutions in your personal lives, at Berkeley, and beyond!

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Rosenzweig, Gheihman

## PB HLTH 209W Comparative Health Systems 3 Units

Terms offered: Not yet offered

In the past decade, health systems and their role in global health have received increasing focus. While disease-focused, 'vertical programs', such as malaria and HIV/AIDs still command the lion's share of donor resources, it has become clear that the sustainability of disease programs depends on embedding them into a country's health system. This course provides a real world, practical understanding of health systems, based on a solid academic foundation. It introduces current debates about health systems, health financing, and universal health coverage in the international community. Students will use five key structural questions to analyze health care systems and their performance on quality, cost and access metrics.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W209 after completing PB HLTH 209. A deficient grade in PB HLTH W209 may be removed by taking PB HLTH 209.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Feachem

**Formerly known as:** Public Health W209

## PB HLTH 210 Foundations of Maternal and Child Health Policy, Practice and Science 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will explore issues related to maternal, child, and adolescent health throughout the life course with a focus on the social determinants of health, health disparities, and social justice. Discussion will focus on current issues central to maternal and child health policy and practice; the history and organization of MCH health services in the US; and analyze the ways in which the political context in the US and internationally affects the health and well-being of families, including critical examination of the ways in which knowledge about an issue, an understanding of the social strategies to address that issue, and political will are all leveraged to influence the creation of MCH policy.

### Rules & Requirements

**Prerequisites:** Consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Pies

## PB HLTH 210B Adolescent Health 3 Units

Terms offered: Spring 2025, Spring 2023, Spring 2022

This course is designed to provide an understanding of the epidemiology and etiology of critical health issues among adolescents, including complex contextual influences and individual processes related to this dynamic period of life. Each adolescent health outcome will be considered in light of developmental issues related to the pubertal transition and multilevel influences that contribute to adolescent health and well-being, including 1) biological, 2) cognitive, 3) behavioral, and 4) social-culture factors. The course will emphasize: empirical evidence for the etiology of adolescent health problems, documented risk and protective factors, and content and timing of preventive intervention efforts to ameliorate risk.

### Rules & Requirements

**Prerequisites:** Graduate standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Deardorff

## PB HLTH 210D Reproductive and Perinatal Epidemiology 3 Units

Terms offered: Spring 2025, Spring 2020, Spring 2017

This course will focus on research methods and issues in perinatal and reproductive epidemiology with an emphasis on methodologies and specific case studies. Specific adverse reproductive outcomes, risk factors, and prevalence will be discussed. The course will include critiques of published studies, methods of conducting epidemiologic research and data collection, and techniques of proposal writing.

### Objectives & Outcomes

**Course Objectives:** Apply the fundamentals of study design and grant writing

Critique scientific literature

Discuss and describe the epidemiology of specific reproductive outcomes including their risk factors and prevalence

Explore epidemiologic challenges unique or specific to reproductive/perinatal outcomes

Review epidemiologic methods used in maternal and child health research and the specific strengths and limitations of these methods

### Rules & Requirements

**Prerequisites:** Graduate standing in public health or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Padula

## PB HLTH 210E Practicum in MCH Data Analysis I 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course is designed to support MCH students complete their masters capstone project. Part I is offered in the Fall and Part II is in Spring.

### Rules & Requirements

**Credit Restrictions:** Formerly known as: PH 293-7 MCH Seminar.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Harley

## PB HLTH 210F Practicum In MCH Data Analysis II 1 - 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The course is designed to support MCH students working on their Master's Capstone project. The course goal is to support students in a variety of methodological issues and practical issues. The course is a combination of formal class meetings and one-on-one meetings.

### Rules & Requirements

**Credit Restrictions:** Formerly known as: 293-6 Practical Issues in MCH Data Analysis.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-2 hours of seminar and 1-2 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Harley

## PB HLTH 210J Maternal, Child & Adolescent Health Journal Club 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The purpose of this seminar is to learn how to critically review peer-reviewed articles in the field of maternal, child, adolescent and family health (MCAH). This is a required course for all Maternal, Child, and Adolescent Health MPH students and some MCAH Specialty areas. Others may enroll with permission of the instructor.

### 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:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructor:** Eskenazi

## PB HLTH 210K Foundations of Maternal, Child, and Adolescent Health Leadership 2 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

This course introduces students to theories and concepts of leadership and explores ways of applying these to maternal, child, and adolescent health issues. This course provides opportunities for students to develop skills and resources for further developing their own leadership. The skills taught in this course will prepare students to become dynamic, thoughtful leaders in the field of MCAH with a particular focus on continued self-reflection and development to lead programs that address the diverse issues facing MCAH populations.

### 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:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructor:** Strouse

## PB HLTH 210L Abortion: Implications for Public Health 2 Units

Terms offered: Fall 2025

This class will orient students to important definitions, tools, and activities to understand the public health implications of abortion, to inform their and others' attitudes and beliefs about abortion, and ultimately, to prevent morbidity and mortality caused by unsafe abortion. The course will explore women's rights, reproductive rights, human rights, and foster discussion about access to abortion services as a form of empowerment.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Prata

## PB HLTH 211 Health and Human Rights 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The course examines the origins of health and human rights concerns and outlines a conceptual basis for human rights among health professionals. It provides an overview of the epidemiology of human rights violations worldwide and an analysis of the psychology of abuse. The course considers the role of health professionals in (1) documenting the health and social consequences of human rights violations and war; (2) treating survivors of abuse; (3) addressing specific human rights concerns of women and children; (4) identifying the impact of health policy on human rights; and (5) participating in human rights education and advocacy. The course will also examine issues of universality of human rights and cultural relativism and the role of accountability for the past abuses in prevention.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Iacopino, Weinstein

## PB HLTH 212A International Maternal and Child Health 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Assessment of health status of mothers, infants, and children on worldwide basis; special emphasis on problems, policies, and programs affecting MCH and family planning in developing countries.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Miller

## PB HLTH 212W Foundations of Global Health 3 Units

Terms offered: Fall 2025

This course introduces students to the basic principles of global public health that are used to improve population health at all levels. The course will start with an introduction to essential concepts from public health disciplines that are the foundations of global health practice. Students will then apply these concepts to current global health challenges through course activities, assignments, and readings that will provide a real world context. Global health experts will share their experiences and lessons learned from implementing global health research and programs. Throughout the course, students will gain critical and creative-thinking experience in applying tools and frameworks towards addressing diverse global health needs.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W212 after completing PB HLTH 212. A deficient grade in PB HLTH W212 may be removed by taking PB HLTH 212.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Reingold, Fong

**Formerly known as:** Public Health W212

## PB HLTH 213A Family Planning, Population Change, and Health 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Course examines the determinants of family size and the role played by contraception, voluntary sterilization, and induced abortion in the transition to small families. It looks at the factors controlling access to fertility regulation in developed and developing countries and discusses the factors that have made for successful family programs as well as those that have generated controversy. The course looks at the relationship between family planning and the health of women and children and at the role of family size in economic development and environmental problems. It looks at advances in family planning, organization, and promotion of services and discusses ethical issues facing providers.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Campbell, Potts, Prata



## PB HLTH 213W Global Health Ethics 3 Units

Terms offered: Fall 2025

This course provides an overview to ethical issues within a global health context. The course starts with an introduction to ethical frameworks, theories, and historical references that elevate the ethics conversation to the global stage. The course will then link theory to practice as we delve deeper into ethical issues in research, experiential learning, and delivery. We will consider ethical questions about the discipline of global public health and the roles of governments, academic institutions, organizations, health professions, and members of the public as stewards of health. Students will gain a deeper understanding of the diverse international perspectives on the concepts of ethics and health.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Haar, Dandu, DeBoer

**Formerly known as:** Public Health W213

## PB HLTH 215 Anti-Racist and Racial Justice Praxis Spring Student Elective 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

The Anti-Racist and Racial Justice Praxis Spring Student Elective is a semester-long student elective course for continuing students. This class will cultivate up to 40 student champions to develop an anti-racist analysis of public health, present a set of anti-racist public health tools, and build skills necessary for advancing an anti-racist agenda within the field.

### Objectives & Outcomes

**Course Objectives:** Analyze how systems of racism operate in a modern context and impact health

Apply new skills when working to implement an anti-racist agenda at the institutional and governmental levels.

Recognize common challenges and problems in racial dialogue and learn skills to overcome these issues.

### Rules & Requirements

**Prerequisites:** A Health and Social Behavior breadth course; PBHLTH 200L, PBHLTH W200G or PBHLTH 203A

### Hours & Format

**Fall and/or spring:** 15 weeks - 2.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Malawa, Gaarde

## PB HLTH 216A Biological Embedding of Social Factors 2 Units

Terms offered: Fall 2019, Fall 2017, Spring 2016

This is an interdisciplinary course which will adopt a broad-based ecological perspective of health and behavior. This class will emphasize the interconnected and multidirectional relationships between biology, behavior, and the social environment. This course will be conducted as a seminar series (with a focus on biological processes). We will investigate the assertion that biological, psychological, and social processes interact over a lifetime to influence health and vulnerability to disease (a developmental epigenetic perspective). Rather than focusing on "if" social factors can influence health and disease we will focus on "how" social factors may regulate/change biological measures. Three very general themes will be addressed: development, "social" neuroscience and gene-environment interactions as they relate to behavior. Topics such as constraints/plasticity and behavior, genetic determinism, vulnerability versus resilience, gene-environment interactions, fetal/developmental programming, and stress will all be touched upon.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Francis

## PB HLTH 218B Evaluation of Health and Social Programs 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The study of concepts, methods, rationale, and uses of evaluation research as they apply to health and social programs.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.



## PB HLTH 218W Evaluation of Health and Social Programs 3 Units

Terms offered: Not yet offered

This course provides an overview of the concepts and methods of program evaluation. The course will be useful to those concerned with evaluation of health and social service programs. Participants will develop the critical skills necessary to assess the quality of evaluation research projects, to apply technical skills in professional practice, and to develop evaluation plans for a variety of health and social programs.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W218 after completing PB HLTH 218. A deficient grade in PB HLTH W218 may be removed by taking PB HLTH 218.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Formerly known as:** Public Health W218

## PB HLTH 219C Community-Based Participatory Research in Public Health 3 - 4 Units

Terms offered: Spring 2024, Spring 2022, Spring 2020

The goal of this seminar is to provide doctoral and advanced master's degree students with an understanding of theories, principles, and strategies of community-based participatory research (CBPR) and related traditions. The advantages and limitations of this approach, skills necessary for effective application, and theory-driven case studies will be explored. Students undertaking a service-learning project applying CBPR may receive a 4th unit.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Minkler

## PB HLTH 219E Introduction to Qualitative Methods in Public Health Research 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course is designed to familiarize students who have little or no experience in conducting qualitative research with the perspectives, methods, and techniques of a vast and contentious tradition of research. The course will cover some of the methods of data collections used in the conduct of qualitative inquiries, the analysis of textual data, the write-up of findings from qualitative studies, and the development of a qualitative research proposal. While learning about qualitative methods, students will gain an understanding of the qualitative research literature on a topic of their choice, as well as how to integrate findings from a variety of qualitative studies on a research question of topic.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Miller

## PB HLTH 219W Social and Behavioral Health Research: Introduction to Survey Methods 3 Units

Terms offered: Summer 2025 Second 6 Week Session

This course provides a thorough background in the design, administration, and interpretation of a range of survey strategies (e.g., telephone, face-to-face, mail and internet surveys) within the broader context

of a research or evaluation project. Topics will include formulation of study aims, developing an appropriate research design, protection of human subjects and proper conduct of research, sample size calculations, recruitment strategies, survey administration, and development of an analysis plan. Class topics are designed to convey practical knowledge through topical lectures, group activities, partner feedback and a survey design project consisting of two parts: a survey instrument and a research plan.

### Objectives & Outcomes

- Student Learning Outcomes:**
1. Formulate research questions and develop testable hypotheses appropriate for survey research
  2. Identify appropriate survey tools to address a particular research question and hypothesis
  3. Define and operationalize constructs and variables for survey research
  4. Assess the reliability and validity of survey measures
  5. Select a sampling design optimized for examining a particular research question and hypothesis
  6. Demonstrate the ability to identify and address cultural and ethical considerations in conducting survey research, particularly involving diverse and special populations (including children, the elderly, and those diagnosed and treated for acute and chronic conditions) where relevant
  7. Develop an analysis plan and dissemination plan linked to research questions, hypotheses and a survey instrument

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W219 after completing PB HLTH 219. A deficient grade in PB HLTH W219 may be removed by taking PB HLTH 219.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Sheats

**Formerly known as:** Public Health W219

## PB HLTH 220 Health Policy Decision-Making 3 Units

Terms offered: Fall 2023, Fall 2022, Fall 2021

Introduction to federal-level health policy and analysis of government capacity in addressing major issues in health policy. The course explores structural impediments to reform in the US, regulatory decision-making -- particularly decision-making under conditions of uncertainty, and basic tools of policy analysis. Students will apply these tools in a seminar paper that analyzes a proposed or existing health policy or program.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Sentell

## PB HLTH 220C Health Risk Assessment 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course introduces the basic scientific principles of environmental health risk assessment, develops the understanding necessary to carry out and interpret quantitative risk assessments, and describes the context in which decisions manage environmental health risks are made. The course presents the quantitative methods used to assess the human health risks associated with exposure to microbial and chemical agents, focusing on the four major components of risk assessment: hazard identification, dose-response assessment, exposure assessment and risk characterization. The course examines the application of environmental health risk assessment to contemporary issues including the associated complexities, challenges and controversies.

### Rules & Requirements

**Prerequisites:** 250A, 270A-270B recommended. Graduate standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Zhang, Smith

## PB HLTH 220D Health Policy Advocacy 3 Units

Terms offered: Spring 2025, Spring 2024, Fall 2023

A graduate seminar in practice-based means to advocate for health policy. This course focuses on data based strategies using persuasive written and oral communication skills necessary to preserve and/or improve the health status of populations. Students will develop research, organization, and coalition-building skills necessary to produce an effective advocacy campaign. The course identifies the roles of those involved in the making of policy and demonstrates the use of appropriate channels and technologies to influence health policy change.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Snyder

## PB HLTH 220DW Health Policy Advocacy 3 Units

Terms offered: Fall 2025

The course focuses on strategic policy-making, messaging informed by values and data, and persuasive written and oral communication skills necessary to preserve and/or improve health and advance health equity. Students will understand and situate the important role of focused public health advocacy in the spectrum of public health practice. Students will develop research, strategy, organization, communication, and coalition-building skills necessary to produce an effective advocacy campaign and understand the unique approaches to advocacy in different forums. The course identifies the roles of those involved in making policy and demonstrates the use of appropriate channels and technologies to influence health policy change.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 220DW after completing PB HLTH 220D. A deficient grade in PB HLTH 220DW may be removed by taking PB HLTH 220D.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Johnson, Iton

## PB HLTH 220E Global Health Policy 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will provide an intensive, case-based introduction to global health policy. Students will simulate working on teams asked to advise Ministries of Health in low- and middle-income countries and other global policymaking institutions grappling with health policy questions. Over a series of four cases, the course will introduce students to key concepts in health policy and economics, including allocating scarce resources, pandemic response, financial incentives to shape provider behaviors, and policies to influence the private sector to improve population health. Students will also become familiar with the major actors and institutions that shape international health policy.

### Rules & Requirements

**Prerequisites:** Graduate standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bertozzi

## PB HLTH 220MW Health Policy Methods 3 Units

Terms offered: Summer 2025 Second 6 Week Session

This course serves as an introduction to key topics in health policy making in the United States, with a focus on the policy process and policy analysis methods. Using the policy analysis framework of Eugene Bardach's Eightfold Path first introduced in PBHLTH W200E, the course will explore the entire policy analysis process from the identification of a problem, to the evaluation of policy solutions, and finally to the techniques and formats for effective health policy communications. This analysis method is contextualized within the process of public policy making within the U.S. government.

### Objectives & Outcomes

#### Course Objectives: •

Apply learned policy analysis skills to proposed and existing public health policies.

- Build critical policy analysis skills to identify and evaluate the methods used for developing policy alternatives and understand the impact of existing public health policies.
- Critique the role of research and evidence in public health policy formation and evaluation.
- Describe our country's institutional players (i.e., legislative, administrative, judicial), their roles in policy making and how to influence policy outcomes.
- Leverage critical analysis tools of language and framing to develop and advocate health policies in verbal and written communication deliverables.

#### Student Learning Outcomes: •

- Conduct policy advocacy: understand the gaps in community needs and articulate these needs in the policy setting. Develop innovative strategies for influencing health policy for diverse groups.
- Conduct policy analysis: evaluate and analyze policy solutions that are culturally competent. Communicate evidence and recommendations succinctly and persuasively.
- Deepen understanding of the dimensions of the policy-making process, including the roles of ethics and evidence.
- Examine current public health issues and their impacts on public health and health equity.
- Learn about the health policy context and the institutions, stakeholders, advocacy groups and processes that shape policy outcomes.
- Recognize the disparate impacts of policies on communities with intersectional identities.

### Rules & Requirements

**Prerequisites:** PB HLTH W200E

**Credit Restrictions:** Students will receive no credit for PB HLTH W220M after completing PB HLTH 220, or PB HLTH 220M. A deficient grade in PB HLTH W220M may be removed by taking PB HLTH 220, PB HLTH 220, or PB HLTH 220M.

### Hours & Format

#### Fall and/or spring:

7 weeks - 6.5 hours of lecture per week

## PB HLTH 222A Biomedical Innovation Policy 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Course examines the policy framework for biomedical technology, including medical devices, drugs, diagnostics, digital therapeutics and algorithms. Emphasis will be placed on the funding of research and development, the protection of intellectual property, FDA market authorization, insurance coverage and algorithm design. Focus will be on the US but will examine industrial policy and innovation nationalism within a global context. Students are required to read peer-reviewed articles, keep up with journalistic reports and participate in classroom discussions. Lectures will be pre-recorded and posted on bCourses and it is expected that students will have watched these lectures and done the readings prior to class.

### Objectives & Outcomes

#### Course Objectives: •

Compare the strengths and limits of alternative mechanisms for stimulating R&D investments in the life sciences: research grants, commercialization grants, tax credits, patent-protected pricing, innovation prizes, and advanced market commitments, among others.

- Describe the basic principles and applications of intellectual property policy and the tradeoffs between greater access to current treatments, via low product prices, and greater incentives for investment in new treatments, via high prices.
  - o Intellectual property policy with respect to generics and biosimilars

- Discuss the basic structure of regulatory market authorization:
  - o FDA review of safety and efficacy for pharmaceuticals
  - o Accelerated review and the evolution of evidentiary demands
  - o Market authorization for medical devices, diagnostic tests, digital therapeutics

- Explain the basic principles of health technology assessment and their applicability to insurance coverage and pricing.

### Rules & Requirements

**Prerequisites:** Graduate standing. Undergraduates will be considered on case-by-case basis

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Robinson

## PB HLTH 222AW Biomedical Innovation Policy 3 Units

Terms offered: Not yet offered

This course examines the policy framework for biomedical technology, including medical devices, drugs, diagnostics, digital therapeutics, and algorithms. Emphasis will be placed on the funding of research and development, the protection of intellectual property, FDA market authorization, insurance coverage, and algorithm design. The focus will be on the US but we will examine industrial policy and innovation nationalism within a global context. Students will be required to read peer-reviewed articles, keep up with journalistic reports, and participate in online discussions.

### Objectives & Outcomes

#### Course Objectives: #

Be able to explain the principles of health technology assessment (HTA) and the challenges raised in their application to insurance coverage and pricing for Medicare.

#

Compare the strengths and limits of alternative mechanisms for stimulating R&D investments in the life sciences: research grants, commercialization grants, tax credits, patent-protected pricing, and innovation prizes, among others. Be able to apply these principles to develop a package of policy incentives to encourage investment in novel antibiotics.

#

Describe the basic principles and applications of intellectual property policy and the tradeoffs between greater access to current treatments, via low product prices, and greater incentives for investment in new treatments, via high prices.

#

Intellectual property policy with respect to generics and biosimilars

#

Discuss the structure of regulatory market authorization, including FDA review of safety and efficacy for pharmaceuticals and market authorization for medical devices, diagnostic tests, digital therapeutics. Apply these principles in video debate over FDA accelerated review.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W222A after completing PB HLTH 222A. A deficient grade in PB HLTH W222A may be removed by taking PB HLTH 222A, or PB HLTH 222A.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Robinson

**Formerly known as:** Public Health W222A

## PB HLTH 223A Capstone Seminar in Health Policy and Management Part 1 1 Unit

Terms offered: Fall 2025, Fall 2014, Fall 2013

First semester of a year-long course; an integrative seminar to provide a supportive environment for master's degree students in the HPM program of the School of Public Health. During the first semester, students learn about the Capstone requirements, learn research techniques that may be applied to their projects, and define their project. The course includes weekly lectures on research methods as well as in-class exercises practicing these methods and applying them to potential Capstone topics. In the second semester, students conduct an applied methods thesis, write a report and present it. A core requirement which prepares students to transition to the profession; it fulfills Council on Education for Public Health (CEPH) requirement.

### Rules & Requirements

**Prerequisites:** Graduate standing in Health Policy and Management and completion of PBHLTH 297 (internship) or one-year practicum (in progress)

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade. This is part one of a year long series course. A provisional grade of IP (in progress) will be applied and later replaced with the final grade after completing part two of the series.

**Instructor:** Webb

## PB HLTH 223B Capstone Seminar in Health Policy and Management Part 2 2 Units

Terms offered: Fall 2009, Fall 2008, Fall 2007

Second semester of a year-long course; an integrative seminar to provide a supportive environment for master's degree students in the HPM program of the School of Public Health. In the first semester, students learn about the Capstone requirements, learn research techniques that may be applied to their projects, and define their project. During the second semester, students conduct an applied methods thesis, write a report and present it. The course addresses challenges students are experiencing in conducting their projects as well as real-time problem solving for these challenges. A core requirement which prepares students to transition to the profession; it fulfills Council on Education for Public Health (CEPH) requirement.

### Rules & Requirements

**Prerequisites:** PBHLTH 223A; completion of PBHLTH 297 (internship) or one-year practicum (in progress)

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade. This is part two of a year long series course. Upon completion, the final grade will be applied to both parts of the series.

**Instructor:** Webb

## PB HLTH 223C Strategic Management and the Health Sector 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The overall purpose of this course is to assist the student in managing health care organizations from a strategic perspective. This is accomplished by systematically addressing systemwide, organization-wide, group- and individual-level issues in strategy formulation, content, implementation, and performance. Emphasis is placed upon the manager's role in simultaneously taking into account a wide variety of internal and external factors to improve organization and system performance in meeting the health needs of individuals and communities. Emphasis is also placed on the development and implementation of strategies to meet multiple stakeholder demands, particular attention given to continuous quality improvement/total quality management.

### Rules & Requirements

**Prerequisites:** Business Administration 205 or 224A and 223A or consent of instructor. Students are required to have a general background knowledge of the health services system

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Shortell, Oxendine

## PB HLTH 223D Foundations of Health Policy and Management 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course is designed as a first semester seminar for master's students in the Division of Health Policy and Management. The purposes of this course are fourfold: 1) to provide an overview of the U.S. medical and health care systems; 2) to provide an introduction to basic concepts and competencies in health policy analysis and health management; 3) to provide internship preparation and career development activities; and 4) to provide opportunities to develop relationships with 1st- and 2nd-year HPM students and with faculty.

### Rules & Requirements

**Prerequisites:** Graduate standing in Health Policy and Management or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Oxendine, Solomon

## PB HLTH 223E Capstone Seminar in Health Policy and Management 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course is an integrative seminar that builds on the core curriculum requirements of the school and HPM specialty. Participants are master's degree students advancing to candidacy. After sharing their internship experiences and the impact on career decisions, the students are required to draw on situations from their internship to demonstrate what they have learned by leading fellow seminar participants in facilitated discussions, culminating in a specific management recommendation or policy position. Students will gain exposure to a range of HPM issues based on the experiences of their peers. Each student is also required to produce a 20-page paper and prepare and deliver a formal presentation to seminar participants and invited faculty. The paper will address an HPM topic of interest that has been selected by the student and approved by the course faculty and the student's academic advisor. Suggested formats for the paper are a policy or strategic management analysis, but other options may be proposed and approved by the instructor.

### Rules & Requirements

**Prerequisites:** Graduate standing in HPM and completion of 297 internship

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Solomon



## PB HLTH 223K Health Policy and Management in Public Health 1 Unit

Terms offered: Spring 2025

This course incorporates four key CEPH competencies related to health policy and management and provides the student with an understanding of the nature and essential components of public health and health policy and management. Specifically, the course opens with an overview of the key roles that public health plays and then takes a look at dimensions of the structure of health systems, key managerial concepts in finance and resource allocation and how the policy setting process can impact different populations in potentially unequal ways. For each topic area, general framing will be presented and then a more specific use case framed to allow the student to consider a tangible example.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## PB HLTH 223W Strategy in Health Care Organizations 3 Units

Terms offered: Summer 2025 Second 6 Week Session

This course is an introduction to health care strategy in which students will have an immersive, practical, hands-on experience in the strategic management of a real or fictitious health care organization. This course will familiarize students with the requisite skills and techniques to lead strategic change at a division, department, or enterprise level within a health care organization.

### Objectives & Outcomes

#### Course Objectives: 1.

Strategic Management Theory and Leading Practices. Students will learn this through a combination of lectures, readings from the textbook and business journal articles, and "how to" instructional videos.

#### 2.

Real World Experience. Students will learn this through a combination of Executive Interviews, Case Studies, and personal reflection.

#### 3.

Hands-on Practice. Students will learn this through a carefully designed, team-based practical experience in which they for a real or fictitious health care organization of their choice.

**Student Learning Outcomes:** Adjust organizational strategy in response to real-time crises.

Define and align their organization's mission, vision, values, and strategy.

Learn how to define and measure key performance indicators (KPIs).

Learn how to successfully implement a strategy by creating a Strategic Roadmap, high level Project Plan, and Risk Mitigation Plan.

Learn various common strategies, including: Growth by Concentration/Horizontal Integration, Growth by Related Diversification/Vertical Integration, and Innovation.

Learn various tools and techniques that may be used in informing a strategy including: Value Chain Analysis, Benchmarking, SWOT Analyses, Root Cause Analysis, Porter's Five Forces Model, Scenario Planning, and Balanced Scorecards.

Understand the important influences of leadership and culture on the successful execution of the strategy.

Understand the pros and cons of strategic alternatives including: Internal Development, Internal New Venture Creation, Investment in New Ventures, Acquisition, Mergers, Joint Ventures/Strategic Alliances/Partnerships, and Innovation.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W223 after completing PB HLTH 223. A deficient grade in PB HLTH W223 may be removed by taking PB HLTH 223.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Webb

**Formerly known as:** Public Health W223

## PB HLTH 224A Organizational Behavior and Management in Health Care 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Introduction to health administration, focusing on theories of management, organizations, and environments as they relate to the administration of health services. Cases, simulation, and structured experiences will be used to tie theory to practice.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Rodriguez

## PB HLTH 224D Doctoral Seminar: Organizational Analysis of the Health Care Sector 3 Units

Terms offered: Fall 2022, Spring 2021, Fall 2017

This course examines major theories and frameworks for analyzing health care organizations. Emphasis is given to the application and testing of theories in the health care sector. Population ecology, transaction-cost economics, strategic management, and network theories are examined. The seminar will rely on extensive student participation.

### Rules & Requirements

**Prerequisites:** One doctoral-level organizational theory course or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Shortell

## PB HLTH 224E Health Care Quality 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The course focuses on the quality of Health Care in the United States, including variations and determinants in quality and best practices in improving quality. Students will develop an understanding of conceptual frameworks for Health Care problem solving and quality improvement. As part of the class they will gain experience in designing a Health Care quality improvement plan. The course is designed for Graduate students interested in healthcare delivery.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Nazeeri-Simmons

## PB HLTH 224W Organizational Behavior and Management in Health Care 3 Units

Terms offered: Fall 2025

Today, the health care system consists of a mixture of organizational forms that plan, regulate, and deliver medical care and other health services. The objective of this course is to consider 1) the structure of these organizations and the factors that affect their performance, as well as their growth and decline and 2) the role that health care managers play in the organizations in which they work.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W224 after completing PB HLTH 224. A deficient grade in PB HLTH W224 may be removed by taking PB HLTH 224.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Rodriguez

**Formerly known as:** Public Health W224

## PB HLTH 225AW Introduction to Applied Implementation Science 1 Unit

Terms offered: Not yet offered

This introductory course will serve as the gateway for students into the world of applied IS. It has been designed keeping in mind students looking to gain a preliminary understanding of the principles and practice of IS. The module will provide a broad overview of the theoretical and evidence-based models and frameworks used in the field as well as the barriers and challenges faced by implementation scientists in the real-world application of evidence-based practices, programs and policies.

### Objectives & Outcomes

**Course Objectives:** Apply varied frameworks for the translation of evidence

Examine and evaluate different strategies/tools of implementation science

Gain a methodological understanding of implementation science

Identify and scientific evidence and discern its quality and relevance

### Hours & Format

**Fall and/or spring:** 8 weeks - 1 hour of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bertozzi

**Formerly known as:** Public Health W225A

## PB HLTH 225BW Implementation Science: Applied Case Studies 1 Unit

Terms offered: Not yet offered

This course provides hands-on experience for students to apply their learnings from "PH W225A Introduction to Applied Implementation Science" to global policy contexts. It has been designed to provide practical exposure to the world of Implementation Science, by employing the models and frameworks discussed in the introductory module to diverse public health programs around the world.

### Objectives & Outcomes

**Course Objectives:** Adapt evidence to different geographical and cultural contexts

Analyze and streamline scientific evidence

Assess potential costs and benefits of introducing and implementing an intervention

Design an implementation methodology while accounting for local constraints

Identify potential challenges in implementation success and failures

Measure the impact of an intervention on select predetermined health outcomes

Optimize resources and manage stakeholders to effectively run programs

### Rules & Requirements

**Prerequisites:** Students need to have taken PBHLTH W225A:

Introduction to Applied Implementation Science or demonstrate substantial prior experience in the field of implementation science research and/or practice

### Hours & Format

**Fall and/or spring:** 8 weeks - 1 hour of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bertozzi

**Formerly known as:** Public Health W225B

## PB HLTH 226A Health Economics A 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course introduces students to the economics of health and health care. In addition to familiarizing students with the language and tools of health economics, the course will provide an overview of key institutional features of the health economy as well as important research findings in the field. These will be used to evaluate the economic logic and incentives in competing proposals for health care reform.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Robinson

## PB HLTH 226AW Health Economics 3 Units

Terms offered: Fall 2025

This online course provides an overview of the United States healthcare system using a microeconomic lens. Students will be introduced to the microeconomic theory and empirical students that will deepen their understanding of how consumers, firms and the government influence healthcare expenditures (including its quantity and prices), healthcare quality, and patient health outcomes. These economic models will enable students to predict how changes in consumer behavior, the industrial organization of firms, and government policies affect healthcare and health outcomes.

### Rules & Requirements

**Prerequisites:** Introduction to Health Policy and Management (PH W200E)

**Credit Restrictions:** Students will receive no credit for PB HLTH W226A after completing PB HLTH 226A. A deficient grade in PB HLTH W226A may be removed by taking PB HLTH 226A.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Fulton

**Formerly known as:** Public Health W226A

## PB HLTH 226C Economics of Population Health 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

This course examines the economic theories and evidence underpinning population health interventions and policies. Topics include the economic evaluation of community and clinical preventive services, systemic population health management innovations, behavioral economics approaches, and policies targeting upstream social determinants of population health. A brief module on cost-effectiveness analysis is included.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Dow

## PB HLTH 226CW Economics of Population Health 3 Units

Terms offered: Not yet offered

This 3-unit online course will explore the economics evidence base and tools for evaluating economic factors and interventions that shape the health of populations. The course will include a substantial economic evaluation module to teach cost-effectiveness analysis tools.

### Rules & Requirements

**Prerequisites:** Graduate Standing

**Credit Restrictions:** Students will receive no credit for PB HLTH 226CW after completing PB HLTH 226C. A deficient grade in PB HLTH 226CW may be removed by taking PB HLTH 226C, or PB HLTH 226C.

### Hours & Format

**Fall and/or spring:** 7 weeks - 14 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Dow

**Formerly known as:** Public Health W226C

## PB HLTH 226D Global Health Economics 3 Units

Terms offered: Spring 2019, Fall 2017, Fall 2015

This class is a survey of different health care systems in western and eastern Europe, the former Soviet Union, Canada, Japan, Taiwan, and China. Other countries will be added to meet the interests of students. The course examines the structure and financing of the health system in each country and assesses the effectiveness, efficacy, and equity of each system. Students will make a presentation on a country's health system and write a paper.

### Rules & Requirements

**Prerequisites:** Graduate standing and knowledge of health policy and consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Scheffler

## PB HLTH 226FW Cost-Effectiveness Analysis 1 Unit

Terms offered: Not yet offered

This course teaches students cost-effectiveness analysis and related tools in a compact 3-week online format. Students will learn when and why to use alternative economic evaluation methods to assess benefits relative to costs of health policies and interventions. They will also learn to interpret and critique such analyses, and to conduct basic cost-effectiveness analyses themselves.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W226F after completing PB HLTH 226F. A deficient grade in PB HLTH W226F may be removed by taking PB HLTH 226F.

### Hours & Format

**Fall and/or spring:** 3 weeks - 5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Dow

**Formerly known as:** Public Health W226F

## PB HLTH 227A Health Care Finance 3 Units

Terms offered: Spring 2019, Spring 2017, Fall 2015

This course covers finance and strategic financial management in the health services and products industry, including provider organizations, insurance firms, and biopharmaceutical and medical device companies. Cases are used to apply the financial analysis and planning skills learned in the course. Topic areas include financial statement analysis, pricing and service decisions, debt financing, venture capital, and private equity, IPO and public equity markets, risk and return, capital budgeting and project risk assessment, mergers and acquisitions, vertical and horizontal integration.

### Rules & Requirements

**Prerequisites:** Graduate standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** MacPherson

## PB HLTH 227AW Health Care Finance 3 Units

Terms offered: Not yet offered

This 3-unit online course provides the student with an understanding of the importance of finance in healthcare and provides basic financial and accounting skills needed by all health professionals. The course introduces student to concepts in both financial and managerial accounting and teaches students relevant financial techniques used by managers and those charged with key capital investment decisions including: ratio analysis, cost-volume profit analysis, discounted cash flow and forecasting.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W227A after completing PB HLTH 227A. A deficient grade in PB HLTH W227A may be removed by taking PB HLTH 227A.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 7 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** MacPherson

**Formerly known as:** Public Health W227A

## PB HLTH 231A Analytic Methods for Health Policy and Management 3 Units

Terms offered: Spring 2024, Spring 2022, Spring 2020

This course provides an overview of analytic methods that Master's students in health policy and management should be familiar with. Topics include linear regression, limited dependent variable models such as logit, design, and analysis of complex surveys (with weighted and clustered sampling), and quasi-experimental causal analysis. The course complements 245, with an emphasis on enabling nonstatisticians to interpret and critique applications in the HPM literature.

### Rules & Requirements

**Prerequisites:** 142 or equivalent (basic probability and statistics)

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Dow

## PB HLTH C233 Healthy Cities 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Exploration of common origins of urban planning and public health, from why and how the fields separated and strategies to reconnect them, to addressing urban health inequities in the 21st century. Inquiry to influences of urban population health, analysis of determinants, and roles that city planning and public health agencies - at local and international level - have in research, and action aimed at improving urban health. Measures, analysis, and design of policy strategies are explored.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Corburn

**Formerly known as:** City and Regional Planning 256

**Also listed as:** CY PLAN C256

## PB HLTH C234 Green Chemistry: An Interdisciplinary Approach to Sustainability 3 Units

Terms offered: Spring 2016, Spring 2015, Spring 2014, Spring 2013  
Meeting the challenge of global sustainability will require interdisciplinary approaches to research and education, as well as the integration of this new knowledge into society, policymaking, and business. Green Chemistry is an intellectual framework created to meet these challenges and guide technological development. It encourages the design and production of safer and more sustainable chemicals and products.

### Rules & Requirements

**Prerequisites:** One year of chemistry, including a semester of organic chemistry, or consent of instructors based on previous experience

### Hours & Format

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

**Summer:** 6 weeks - 20 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Arnold, Bergman, Guth, Iles, Kokai, Mulvihill, Schwarzman, Wilson

**Also listed as:** CHEM C234/ESPM C234

## PB HLTH 236 U.S. Food and Drug Administration, Drug Development, and Public Health 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The process and principles of drug development will be discussed in the context of the FDA's mandate and reach (basic science, pre-clinical and clinical research, policy, law, and public health), emphasizing the impact of public health emergencies such as HIV on evolution of regulatory policies.

### Rules & Requirements

**Prerequisites:** None

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Miller, Strobos



## PB HLTH 236AW Regulatory Science, Drug Development and Public Health 3 Units

Terms offered: Not yet offered

This basic and introductory course in regulatory science addresses the demand for increased training in the US and abroad by providing an overview of the basic elements of regulation of health practice and health products; providing students with information needed to understand the most important health practice and product regulation issues from the perspective of current regulatory standards, their standards for evidence and the role of innovation in regulatory science.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W236A after completing PB HLTH 236A. A deficient grade in PB HLTH W236A may be removed by taking PB HLTH 236A.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Miller

**Formerly known as:** Public Health W236A

## PB HLTH 237A Theories and Methods in Health Policy and Health Services Research 2 or 4 Units

Terms offered: Fall 2020, Fall 2018

The first half of the course focuses on the application of organization theories to health sector organizations. The second half of the course focuses on the application of public administration and political science theories to health sector organizations. Students will also be exposed to basic research designs, logic models and hypothesis development. Emphasis is placed on critique of existing theories and the associated empirical literature. This PhD seminar course is primarily intended for first year PhD students in the Berkeley PhD Program in Health Policy administered by the School of Public Health on behalf of the Graduate School. The course is also open with the consent of the instructors to students in other PhD programs,

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2-4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Shortell, Keller

## PB HLTH 237B Theories and Methods in Health Policy and Health Services Research B 2 or 4 Units

Terms offered: Spring 2021, Spring 2019

The first half of the course focuses on major economics theories and frameworks relevant to the study of health policy and health services research. The second half of the course focuses on the application of behavioral and social science theories and methods to population health research. Students will also be exposed to basic research designs, logic models, and hypothesis development. Emphasis is placed on critique of existing theories and the associated empirical literature. This PhD seminar course is primarily intended for first year PhD students in the Berkeley PhD program in Health Policy administered by the School of Public Health on behalf of the Graduate School.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2-4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Dow, Deardorff, Rodriguez

## PB HLTH 237C Health Policy Research Colloquium 1 Unit

Terms offered: Fall 2025, Spring 2025, Fall 2024

The Health Policy Research Colloquium series is a program of empirical research seminars focused on the most important issues facing patients, providers health care plans, purchases, and policymakers today. It provides an opportunity for Health Policy doctoral students across all stages of completion to meet regularly, analyse and critique ongoing research, and participate in stimulating discussions with faculty and guest speakers. Students are required to register for and attend the Health Policy Research Colloquium during their first two years of their PhD training.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 0-2 hours of colloquium per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructor:** Shortell

## PB HLTH 237D Health Policy PhD Dissertation Seminar 2 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This PhD dissertation seminar is restricted to advanced students (Year 3+) of the PhD Program in Health Policy. Draw together skills developed in coursework in the preparation and conduct of one's own dissertation project. For students already advanced to candidacy, this will entail presenting research findings. For students not yet advanced, this will involve developing the dissertation prospectus. Students learn to incorporate colleague feedback to improve research projects. Practices associated with human subjects and ethics of research are also emphasized.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 0-2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructors:** Rodriguez, Scheffler, Keller

## PB HLTH 237E Doctoral Seminar in Health Organizations & Management 2 Units

Terms offered: Fall 2025, Fall 2023, Fall 2021

The seminar is required for all first and second-year students in the PhD Program in Health Policy. This seminar focuses on organizational behavior and management research in health. The seminar covers major organizational and management theories and frameworks relevant to the study of health policy and health sector organizations.

### Objectives & Outcomes

#### Course Objectives: a)

Apply conceptual frameworks derived from organization/ management theories to health policy and health services research.

b)

Critique health policy and health services research studies that explore questions related to organization / management of health care.

c)

Pose relevant and important health policy research questions, and devise strategies for testing these questions empirically.

### Rules & Requirements

**Prerequisites:** Doctoral student status or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Brewster, Rodriguez

## PB HLTH 237F Doctoral Seminar in Health Economics 2 Units

Terms offered: Fall 2024, Fall 2022

The seminar is required for all first and second-year students in the PhD Program in Health Policy. This seminar focuses on health economics. Students critically examine empirical research focused on moral hazard, adverse selection, modeling demand, cost-effectiveness analysis, market influences, provider payment, behavioral economics, and benefits design in health care and public health.

### Objectives & Outcomes

#### Course Objectives: a)

To provide an initial exposure to the major economic theories and frameworks relevant to the study of health policy and health services research.

b)

To introduce key empirical methodologies used by economists.

c)

To critique empirical studies conducted from the methodological perspectives typically applied by economists.

d)

To provide overall socialization to the norms and values of the component disciplines as well as the health policy and health services research field as a whole.

### Rules & Requirements

**Prerequisites:** Doctoral student status or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Brown, Dow

## **PB HLTH C240A Introduction to Modern Biostatistical Theory and Practice 4 Units**

Terms offered: Spring 2024, Spring 2023, Spring 2022

Course covers major topics in general statistical theory, with a focus on statistical methods in epidemiology. The course provides a broad theoretical framework for understanding the properties of commonly-used and more advanced methods. Emphasis is on estimation in nonparametric models in the context of contingency tables, regression (e.g., linear, logistic), density estimation and more. Topics include maximum likelihood and loss-based estimation, asymptotic linearity/normality, the delta method, bootstrapping, machine learning, targeted maximum likelihood estimation. Comprehension of broad concepts is the main goal, but practical implementation in R is also emphasized. Basic knowledge of probability/statistics and calculus are assumed.

### **Rules & Requirements**

**Prerequisites:** Statistics 200A (may be taken concurrently)

### **Hours & Format**

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

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Hubbard

**Also listed as:** STAT C245A

## **PB HLTH C240B Biostatistical Methods: Survival Analysis and Causality 4 Units**

Terms offered: Fall 2025, Fall 2024, Fall 2023

Analysis of survival time data using parametric and non-parametric models, hypothesis testing, and methods for analyzing censored (partially observed) data with covariates. Topics include marginal estimation of a survival function, estimation of a generalized multivariate linear regression model (allowing missing covariates and/or outcomes), estimation of a multiplicative intensity model (such as Cox proportional hazards model) and estimation of causal parameters assuming marginal structural models. General theory for developing locally efficient estimators of the parameters of interest in censored data models. Computing techniques, numerical methods, simulation and general implementation of biostatistical analysis techniques with emphasis on data applications.

### **Rules & Requirements**

**Prerequisites:** Statistics 200B (may be taken concurrently)

### **Hours & Format**

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

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** van der Laan

**Also listed as:** STAT C245B

## PB HLTH C240C Machine Learning and Biostatistics in Healthcare 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2023

Machine learning (ML) algorithms are widely applied in our daily lives. The overarching goal of this course is to provide students with an overview and hands-on experiences of popular machine learning methods and biostatistical models adopted in the healthcare system and medical research. The topics of the class include supervised learning methods (GLM, SVM, metric learning, tree-based approaches, and shrinkage based approaches), semi-supervised learning (transduction learning, inductive learning), deep learning and neural networks, adaptive experiments, reinforcement learning and multi arm bandit algorithm, causal inference and resampling based statistical inference. The course will also cover the applications of these methods.

### Rules & Requirements

**Prerequisites:** Probability, Linear Regression, Calculus

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Wang

**Also listed as:** STAT C245C

## PB HLTH C240D Biostatistical Methods: Computational Statistics with Applications in Biology and Medicine II 4 Units

Terms offered: Fall 2017, Fall 2015, Fall 2013

This course and Pb Hlth C240C/Stat C245C provide an introduction to computational statistics with emphasis on statistical methods and software for addressing high-dimensional inference problems that arise in current biological and medical research. The courses also discuss statistical computing resources, with emphasis on the R language and environment ([www.r-project.org](http://www.r-project.org)). Programming topics to be discussed include: data structures, functions, statistical models, graphical procedures, designing an R package, object-oriented programming, inter-system interfaces. The statistical and computational methods are motivated by and illustrated on data structures that arise in current high-dimensional inference problems in biology and medicine.

### Rules & Requirements

**Prerequisites:** Statistics 200A-200B or Statistics 201A-201B (may be taken concurrently) or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Dudoit

**Also listed as:** STAT C245D

## PB HLTH C240F Statistical Genomics 4 Units

Terms offered: Spring 2022, Spring 2021, Spring 2020, Spring 2018, Spring 2017

Genomics is one of the fundamental areas of research in the biological sciences and is rapidly becoming one of the most important application areas in statistics. The first course in this two-semester sequence is Public Health C240E/Statistics C245E. This is the second course, which focuses on sequence analysis, phylogenetics, and high-throughput microarray and sequencing gene expression experiments. The courses are primarily intended for graduate students and advanced undergraduate students from the mathematical sciences.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Dudoit, Huang, Nielsen, Song

**Also listed as:** STAT C245F

## PB HLTH 241 Intermediate Biostatistics for Public Health 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

This course will help students think clearly and critically about asking and answering research questions in public health. The first part of the course covers foundational tools required to formulate and answer clear research question: probability, density, independence, expectation, estimators, sampling distributions, inference, and potential outcomes. The second part of the course uses this language to introduce linear, logistic, and nonparametric regression and shows how to use these methods to answer descriptive, predictive, and causal research questions.

### Objectives & Outcomes

**Course Objectives:** 1. Translate between mathematical notation, diagrams, English prose and code  
2. Demonstrate fundamental ideas in probability and statistics (e.g., conditioning, independence, expectation, consistency) using multivariate simulation

3. Distinguish between estimands and estimates

### Rules & Requirements

**Prerequisites:** PB HLTH 142, PB HLTH W142 or equivalent introductory course in statistics with consent of instructor

**Credit Restrictions:** Students will receive no credit for PB HLTH 241 after completing PB HLTH W241R. A deficient grade in PB HLTH 241 may be removed by taking PB HLTH W241R.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Schuler

## PB HLTH 241W Intermediate Biostatistics for Public Health 4 Units

Terms offered: Not yet offered

This course will help students think clearly and critically about asking and answering research questions in public health. The first part of the course covers foundational tools required to formulate and answer a clear research question: probability, density, independence, expectation, estimators, sampling distributions, inference, and potential outcomes. The second part of the course uses this language to introduce linear, logistic, and nonparametric regression and shows how to use these methods to answer descriptive, predictive, and causal research questions.

### Objectives & Outcomes

**Course Objectives:** 1. Translate between mathematical notation, diagrams, English prose, and code  
2. Demonstrate fundamental ideas in probability and statistics (e.g., conditioning, independence, expectation, consistency) using multivariate simulation

3.  
Distinguish between estimands and estimates

### Rules & Requirements

**Prerequisites:** PBHLTH 142 or PBHLTH 142W or equivalent introductory course in statistics with consent of instructor

**Credit Restrictions:** Students will receive no credit for PB HLTH 241W after completing PB HLTH 241. A deficient grade in PB HLTH 241W may be removed by taking PB HLTH 241.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Schuler

**Formerly known as:** Public Health W241

## PB HLTH C242C Longitudinal Data Analysis 4 Units

Terms offered: Fall 2024, Fall 2023, Fall 2021

Course covers statistical issues surrounding estimation of effects using data on units followed through time. Course emphasizes a regression model approach for estimating associations of disease incidence modeling, continuous outcome data/linear models & longitudinal extensions to nonlinear models forms (e.g., logistic). Course emphasizes complexities that repeated measures has on the estimation process & opportunities it provides if data is modeled appropriately. Most time is spent on 2 approaches: mixed models based upon explicit (latent variable) maximum likelihood estimation of the sources of the dependence, versus empirical estimating equation approaches (generalized estimating equations). Primary focus is from the analysis side.

### Objectives & Outcomes

**Course Objectives:** After successfully completing the course, you will be able to:

- frame data science questions relevant to longitudinal studies as the estimation of statistical parameters generated from regression,
- derive consistent statistical inference in the presence of correlated, repeated measures data using likelihood-based mixed models and estimating equation approaches (generalized estimating equations; GEE),
- implement the relevant methods using R.
- interpret the regression output, including both coefficients and variance components and

### Rules & Requirements

**Prerequisites:** 142, 145, 241 or equivalent courses in basic statistics, linear and logistic regression

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Hubbard

**Also listed as:** STAT C247C

## PB HLTH 243A Targeted Learning 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

PH 243A teaches students to construct efficient estimators & obtain robust inference for parameters that utilize data-adaptive estimation strategies (i.e., machine learning). Students perform hands-on implementation of novel estimators using high-dimensional data structures, providing students with a toolbox for analyzing complex longitudinal, observational & randomized control trial data. Students learn & apply the core principles of the Targeted Learning methodology, which generalizes machine learning to any estimand of interest; obtains an optimal estimator of the given estimand, grounded in theory; integrates state-of-the-art ensemble machine learning techniques; & provides formal statistical inference in confidence intervals & testing.

### Objectives & Outcomes

**Course Objectives:** Design an ensemble of machine learning algorithms, Super Learner, such that the optimality theory (i.e., oracle inequalities for the general cross-validation selector) is likely to hold for the data at-hand.

Explain the importance of asymptotic linearity and efficiency/inference to non-statistician collaborators, and reason whether or not the current estimator meets these conditions.

Query subject-matter experts, study designers, and others involved in the data generation process in order to

# use the data at-hand to formulate a statistical estimation problem that's realistic, reliable, and reproducible;

# check assumptions that are required to use this data to answer causal questions (i.e., identifiability);

# build a library of machine learning algorithms that is consistent with the process that generated the data;

# design improved (potentially hypothetical) studies that would permit answering the relevant scientific question of interest, and evaluate if this ideal experiment is possible/ethical in the real-world; and

# translate the final scientific question of interest into a statistical question whose answer can be reliably estimated from the data.

Use R's tiverse software ecosystem to

# define a machine learning task that mirrors your estimation problem;

# specify the question of interest in terms of a tiverse Spec; and

# design simulations that can be used to evaluate the behavior of estimators and their inference, ultimately informing your final choice for estimation.

### Rules & Requirements

**Prerequisites:** STAT 201A-B or instructor's consent. PBHLTH C240A / STAT C245A, PBHLTH 252D or STAT C239A recommended

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** van der Laan



## PB HLTH 243B Targeted Learning in Practice 2 - 3 Units

Terms offered: Spring 2023, Spring 2022, Spring 2004

This course follows PBHLTH 243A as a two part series. It provides a self-contained introduction to the computational tools for Targeted Learning through it's accompanying software ecosystem, the tlvse. Each class incorporates a concise preliminary lecture, vignette-guided live coding exercises, and discussion. Students will have the opportunity to perform hands-on implementation of novel estimators for answering causal questions with real- world cross-sectional data using the tlvse software ecosystem of R packages.

### Objectives & Outcomes

**Course Objectives:** Apply standard cross-validation schemes using the origami R package, including V-fold, stratified, ad cluster-specific cross-validation.

Approximate causal effects under stochastic treatment regimes with the tmle3shift R package by defining a single shift, grid of counterfactual shifts, or individual-level shifts of the treatment.

Differentiate stochastic, dynamic, optimal dynamic, and static treatment regimes from each other, and interpret effects under each kind of intervention.

Estimate direct and indirect effects based on decompositions of the total causal effects of static and stochastic interventions with the tmle3mediate R package.

Estimate the effect of a static intervention using the appropriate "Spec", as defined in the tmle3 R package, and apply tmle3's delta method in order to estimate transformations of existing parameters.

Follow the roadmap of statistical learning to define estimation problems in realistic statistical models, and obtain valid inferences.

Obtain and interpret variable importance metrics from the following tlvse R packages: sl3, tmle3, tmle3mopttx, tmle3shift, and tmle3mediate.

Train a super learner using the sl3 R package by selecting an appropriate loss function, metalearner, and assembling a library of candidate machine learning algorithms.

Use the tmle3mopttx R package to learn the optimal individualized treatment regime, and to estimate effects under such data-adaptive regimes.

### Rules & Requirements

**Prerequisites:** PB HLTH 243A

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-1 hours of lecture and 1-1 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** van der Laan

## PB HLTH 243C Information Systems in Public Health 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

An introduction to new information systems, such as the Internet and interactive television, and how they may be used to improve human health. The course has three objectives: first, to familiarize students with new information technologies; second, to review how these technologies will be used by public health professionals, consumers, health care providers, and others; and third, to study related ethical and legal issues such as privacy, access, and liability. The course is designed for people with minimal understanding of interactive technologies.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Van Brunt

## PB HLTH 244 Big Data: A Public Health Perspective 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

Big Data deluge now engulfs almost every brand of science and business, requiring expertise in combination of statistics and computing.

This course aims to help students develop a set of useful skills to cope with the Big Data challenges, with particular focus on Public Health applications. It covers a wide range of modern statistics and machine learning techniques, as well as state of the art computational tools, and emphasizes statistical modeling and inference (e.g., how to properly formulate a hypothesis and a model, develop intuitive insights and interpretations, and evaluate uncertainty of the outcomes) and covers important computational and algorithmic components (modern computational paradigm of Map-Reduce).

### Rules & Requirements

**Prerequisites:** PB HLTH 142 (basic concepts of probability and distributions, point and interval estimation, hypothesis testing), PBHLTH 145 (regression analysis of continuous outcome), PBHLTH 241 (categorical data analysis, some modern statistical learning techniques), or equivalent or permission of the instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Li

## PB HLTH 245 Introduction to Multivariate Statistics 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The following topics are discussed in the context of biomedical and biological application: multiple regression, loglinear models, discriminant analysis, principal components. Instruction in statistical computing is given in the laboratory session.

### Rules & Requirements

**Prerequisites:** 145 or equivalent or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Lahiff

## PB HLTH 246 Biostatistics Consulting 1 Unit

Terms offered: Fall 2025

The goal of this course is to give biostatistics graduate students structured opportunities to work with domain researchers, hone consulting skills, and receive feedback. Consulting is a core ability necessary for success in both academia and industry that we explicitly emphasize in our training program. While student expertise may sometimes not be sufficient to fully resolve the problems raised by collaborators, it is precisely the process of encountering these new problems or of translating unfamiliar scenarios to formal statistical terms that cultivates growth and statistical maturity.

Simultaneously, this provides free quantitative consulting service accessible to MPH students working on their capstone projects.

### Rules & Requirements

**Prerequisites:** Probability theory (STAT 201A or equivalent); Statistics (STAT 201B or equivalent); Linear models (STAT 230A or equivalent); Programming (STAT 243A or equivalent)

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructor:** Schuler

## PB HLTH 249 Grant Writing 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The objective of this course is to introduce students to the fundamentals of proposal writing for epidemiologic research. The course will focus primarily on developing an NIH Research Grant (R Series), though we will also discuss other grant mechanisms. In addition, the course will cover the grant submission process and grant review. Students will write a formal proposal focusing on a specific research question of their choice. Emphasis will be placed on development of significant and innovative research aims, critical evaluation of the previous literature and proposing a valid and feasible approach to address their research question.

### Objectives & Outcomes

#### Course Objectives: •

Demonstrate critical thinking and communication skills

•

Describe principles of grant writing

•

Design an epidemiologic study

•

Explain about the grant submission and review process

### Rules & Requirements

**Prerequisites:** PBHLTH 250A, PBHLTH 250B & PBHLTH 293:

Epidemiology Doctoral Seminar is recommended. Developing a research topic, writing a 1st draft of your Specific Aims takes time. Accomplishing these tasks, writing a full grant proposal is a tall order for a semester. Recommend that prior to taking this class you take PH 293: Epidemiology Doctoral Seminar, which focuses on developing a research topic & Specific Aims. PH 249 picks up where PH 293 leaves off & requires a strong first draft of your Aims page

**Credit Restrictions:** Students will receive no credit for PB HLTH 249 after completing PB HLTH 249, or PB HLTH 249. A deficient grade in PB HLTH 249 may be removed by taking PB HLTH 249, or PB HLTH 249.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Metayer

## PB HLTH 250A Epidemiologic Methods I 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will introduce principles and methods of epidemiology, including types and sources of descriptive epidemiologic data, study designs (intervention trials, cohort, case-control, cross-sectional and ecological), confounding and other types of bias, causal inference, and screening. The course will provide a basic understanding of epidemiology for those pursuing a career in public health, will explain the role of quantitative methods in describing a population's health, and will emphasize the importance of evidence in advancing public health knowledge.

### Rules & Requirements

**Prerequisites:** PBHLTH 142 (may be taken concurrently)

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Scott

## PB HLTH 250B Epidemiologic Methods II 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

This course is intended as an intermediate level course in the field of epidemiology. Topics include causal inference; measurement of disease rates; inferential reasoning; and research study designs including ecologic, case-control, cohort, intervention trials, and meta-analytic designs (potential sources of bias, confounding, and effect modification in each research design are explored in depth); topics in clinical epidemiology including the use of likelihood ratios, receiver operator curves, and the sensitivity, specificity, predictive value of a test; and a brief introduction to logistic regression, survival analysis, and decision analysis. The readings from this course are drawn primarily from advanced epidemiology textbooks (Kleinbaum, Rothman, Miettinen). The course is intended to provide a firm foundation for students who will subsequently enroll in 250C.

### Rules & Requirements

**Prerequisites:** 250A or an equivalent introductory course in epidemiology or advanced degree (M.D., Ph.D., D.V.M.) in a biomedical field

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture and 2 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Ahern or Colford (alternating years)

## PB HLTH 250BW Epidemiologic Methods II 4 Units

Terms offered: Fall 2025

This course is an intermediate level course in epidemiology. It replaces previously approved and delivered courses PHW250F and PHW250G. Topics include causal inference; measurement of disease rates; inferential reasoning; research study designs, ecologic, case-control, cohort, intervention trials, meta-analytic designs; potential sources of bias, confounding, effect modification in research design are explored in depth; topics in clinical epidemiology, likelihood ratios, receiver operator curves, the sensitivity, specificity, predictive value of a test; brief introduction to logistic regression and survival analysis. Topics are covered at a advanced level than PH250A or PHW250. Readings from this course provide a firm foundation for PH250C.

### Objectives & Outcomes

#### Student Learning Outcomes: •

Apply causal frameworks to the assessment of causality in associations

•

Assess the extent of bias in studies and calculate bias-corrected measures

•

Calculate and interpret measures of disease and association.

•

Define the major study designs, including their strengths and weaknesses, and demonstrate their appropriate applications

•

Define, calculate and interpret effect measure modification on different scales

•

Define, calculate and interpret power, sample size, confidence intervals and p-values.

•

Explain sources of bias in studies

•

Explain the purposes, mechanics and limitations of matching in study designs

•

Identify and apply appropriate analytic techniques for study questions, and interpret coefficients and other quantities estimated using these techniques.

•

Identify appropriate applications of measures of disease and association.

•

Identify design and analysis approaches to reduce bias in studies

•

State the purposes of screening, and calculate and interpret screening measures.

Explain the purposes and process of systematic review and meta-analysis.

### Rules & Requirements

**Prerequisites:** PBHLTH 150A, PBHLTH 250A or PBHLTH W250

**Credit Restrictions:** Students will receive no credit for PB HLTH W250B after completing PB HLTH 250B. A deficient grade in PB HLTH W250B may be removed by taking PB HLTH 250B.

### Hours & Format

## PB HLTH 250C Advanced Epidemiologic Methods 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course will cover a series of advanced analytical methods for epidemiologic research, drawing heavily on concepts covered in PH 250B. The course consists of a series of modules, including modeling of epidemiological measures of effect, Bayesian methods, instrumental variable analysis, mediation analysis, missing data, sensitivity analysis and methods to address sources of systematic error in epidemiologic research. Hands-on application is emphasized. Class time will consist of lectures, class discussion, student presentations and a weekly practicum.

### Rules & Requirements

**Prerequisites:** 241, 245, 250B, 252, or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bradshaw

## PB HLTH 250FW Epidemiologic Methods II: Part 1 3 Units

Terms offered: Not yet offered

This course is intended as an intermediate level course in the field of epidemiology. Topics include causal inference; measurement of disease rates; inferential reasoning; and research study designs including ecologic, case-control, cohort, intervention trials, and meta-analytic designs. These topics are covered at a more advanced level than in PH250A or PHW250. The readings from this course are drawn primarily from advanced epidemiology textbooks (e.g., Kleinbaum, Rothman). The course is intended to provide a firm foundation for students who will later enroll in 250C.

### Rules & Requirements

**Prerequisites:** PB HLTH 150A, PB HLTH 250A, or PB HLTH W250

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

**Summer:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** COLFORD, BENJAMIN-CHUNG

**Formerly known as:** Public Health W250F

## PB HLTH N250A Epidemiologic Methods 3 Units

Terms offered: Summer 2025 Second 6 Week Session, Summer 2024 Second 6 Week Session, Summer 2023 Second 6 Week Session

This introductory graduate-level course presents the principles and methods of epidemiology, including descriptive and analytic approaches to assessing the distributions of health, disease, and injury in populations and factors that influence those distributions. The emphasis is on developing an understanding of concepts, rather than quantitative methods, although calculations are involved. Through the combination of lectures, readings, critical review of papers, and problem sets, students without prior coursework in epidemiology will acquire the core competencies in epidemiology expected of all MPH graduates.

### Objectives & Outcomes

**Course Objectives:** Calculate basic epidemiology measures.

Communicate epidemiologic information to lay and professional audiences.

Critically evaluate the strengths and limitations of epidemiologic research publications.

Draw appropriate inferences from epidemiologic data.

Identify key sources of data for epidemiologic purposes

Recognize the important contribution of epidemiology to scientific, ethical, economic and political discussion of health issues.

Understand basic ethical principles pertaining to epidemiologic studies.

Understand public health problems in epidemiologic terms .

Use the basic terminology and definitions of epidemiology.

### Rules & Requirements

**Prerequisites:** There are no prerequisites, although it is advantageous to have taken or be concurrently taking an introductory course in biostatistics (e.g., PH 141 or PH 142)

**Credit Restrictions:** Students will receive no credit for PB HLTH N250A after completing PB HLTH 250A, PB HLTH W250, or PB HLTH N250A. A deficient grade in PB HLTH N250A may be removed by taking PB HLTH 250A, PB HLTH W250, or PB HLTH N250A.

### Hours & Format

**Summer:** 6 weeks - 8 hours of lecture and 4 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## PB HLTH 250W Epidemiologic Methods I 3 Units

Terms offered: Fall 2025

This introductory graduate course presents principles & methods of epidemiology, including descriptive & analytic approaches to assessing the distributions of health, disease & injury in the population & factors influencing those distributions. Emphasis is on developing an understanding of concepts, rather than quantitative methods. Basic calculations are involved. Course consists of readings, critical review of epidemiology papers, brief video lectures to explain key concepts, quizzes & exams that allow students to practice applying epidemiological concepts. Students without prior coursework in epidemiology will acquire the core competencies in epidemiology expected of all MPH graduates. Course shares the same content & learning of PH 250A

### Objectives & Outcomes

**Course Objectives:** Calculate basic epidemiology measures.  
Communicate epidemiologic information to lay and professional audiences.  
Critically evaluate the strengths and limitations of epidemiologic research publications.  
Draw appropriate inferences from epidemiologic data.  
Identify key sources of data for epidemiologic purposes.  
Recognize the important contribution of epidemiology to scientific and ethical discussion of health issues.  
Understand basic ethical principles pertaining to epidemiologic studies.  
Understand public health problems in epidemiologic terms.  
Use the basic terminology and definitions of epidemiology.

### Rules & Requirements

**Prerequisites:** Concurrent or previous enrollment in an introductory biostatistics course (e.g., W142)

**Credit Restrictions:** Students will receive no credit for PB HLTH W250 after completing PB HLTH 250. A deficient grade in PB HLTH W250 may be removed by taking PB HLTH 250.

### Hours & Format

#### Fall and/or spring:

7 weeks - 6 hours of lecture per week  
15 weeks - 3 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** McCoy

**Formerly known as:** Public Health W250

## PB HLTH 251BW Data Visualization for Public Health 2 Units

Terms offered: Fall 2025

In this course we will discuss the theory behind effective graphical design, how to apply this theory to communicating health data to different audiences, and how to produce a variety of graphical types using primarily the ggplot command in the statistical analysis program R. There are two lectures per week accompanied by readings. Generally, the course content and assignments alternate weekly between theory and R programming.

### Objectives & Outcomes

#### Course Objectives: •

Apply color theory and accessibility principles to reach the widest audience.

- Create a data dashboard using REDCap or Tableau.
- Create graphics for print and digital media.
- Effectively communicate your messages, both graphically and verbally.
- Leverage existing graphical applications, including mapping/census data
- Produce different styles of graphics using R.
- Understand the theory behind good graphical design for presenting health data.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W251B after completing PB HLTH 251B. A deficient grade in PB HLTH W251B may be removed by taking PB HLTH 251B.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Mocello

**Formerly known as:** Public Health W251B

## PB HLTH 251D Applied Epidemiology Using R 2 Units

Terms offered: Fall 2019, Fall 2018, Fall 2017

This is an intensive, one-semester introduction to the R programming language for applied epidemiology. R is a freely available, multi-platform (Mac OS, Linux, and Windows, etc.), versatile, and powerful program for statistical computing and graphics (<http://www.r-project.org>). This course will focus on core basics of organizing, managing, and manipulating epidemiologic data; basic epidemiologic applications; introduction to R programming; and basic R graphics.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Aragon

## PB HLTH 251W R for Public Health 2 Units

Terms offered: Fall 2025

The course examines principles & methods underlying the use of R, emphasizing multi-disciplinary, collaborative, & real world uses. We will emphasize practices for collaborative coding using Git/GitHub repositories for storing & sharing code to benefit not only your current collaborators but your most frequent collaborator. We will introduce best practices for organizing data & projects, how to create reproducible examples (a.k.a. *reprex*) for when you get stuck and need to ask the R community for help (but can't share a full dataset because it's too large or contains confidential information). Application of principles will be taught through scenarios that public health practitioners encounter.

### Objectives & Outcomes

#### Course Objectives:

Effectively engage with public health practitioners in the use of R to address current public health and/or policy issues;

Apply knowledge of R to support ongoing analytic work in epidemiology and biostatistics;

Create meaningful visualizations of data and have a basic understanding of tools available through R to present data (including R markdown, R Shiny)

Develop strategies for addressing issues that arise when combining data from multiple, complex data sources;

Identify best practices for project management, programming, and version control when contributing data to evaluate and/or support effective public health interventions;

Leverage existing open-source resources for continued learning and problem solving.

Select appropriate methods for importing, cleaning, and analyzing data within R;

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W251 after completing PB HLTH 251. A deficient grade in PB HLTH W251 may be removed by taking PB HLTH 251.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Wheeler

**Formerly known as:** Public Health W251



## PB HLTH 252 Epidemiological Analysis 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This 4-unit course will cover modern quantitative methods relevant to epidemiologic research drawing heavily on concepts covered in PB HLTH 250B. Course topics include generalized linear models, Kaplan-Meier estimation, survival distributions, and models for parametric and semi-parametric survival analysis. We will also cover methods for confounder selection, dose-response modeling, and interaction and effect modification.

### Objectives & Outcomes

**Course Objectives:** Apply the appropriate statistical model to estimate epidemiologic effects of interest

Articulate necessary assumptions for different methods, and accurately interpret results

Identify measures of association that can be estimated under various study designs

d.

Understand analyses presented in epidemiologic literature, and evaluate their soundness

e.

Follow future developments in epidemiologic research

### Rules & Requirements

**Prerequisites:** PB HLTH 250B, PB HLTH 241, or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bradshaw

## PB HLTH 252AW Introduction to Causal Inference and the Causal Roadmap 4 Units

Terms offered: Not yet offered

With the ongoing "data explosion", methods to delineate causation from correlation are perhaps more pressing now than ever. This course will introduce a general framework for Causal Inference in Public Health:

1) clear statement of the research question, 2) definition of the causal model and effect of interest, 3) assessment of identifiability, 4) choice and implementation of estimators including parametric and non-parametric methods, and 5) appropriate interpretation of findings. The statistical methods include G-computation, inverse probability weighting (IPW), and targeted minimum loss-based estimation (TMLE) with machine learning.

### Objectives & Outcomes

**Course Objectives:** 1.

Translate a research question and background knowledge into a causal model (directed acyclic graphs and non-parametric structural equation models).

2.

Define the target causal parameter with counterfactuals.

3.

Assess identifiability of the target causal parameter and express it as a parameter of the observed data distribution.

4.

Understand the challenge posed by parametric estimation approaches and apply machine learning methods.

5.

Understand the properties of and apply 3 estimators: G-computation, inverse probability weighting (IPW), and targeted minimum loss-based estimation (TMLE) with Super Learner.

6.

Understand how to appropriately address missing outcomes, which may be differentially measured.

7.

Apply course concepts to address cause-and-effect in a real data application.

8.

Be ready to explore more advanced settings for Causal Inference.

### Rules & Requirements

**Prerequisites:** Familiarity with basic probability theory and experience conducting multivariable regression analyses (i.e., generalized linear models). This material is often, but not exclusively, covered in graduate-level courses on introductory statistics and regression (e.g., PH142 Intro to Probability/Statistics and PHW241 Intermediate Biostatistics for Public Health)

**Credit Restrictions:** Students will receive no credit for PB HLTH W252A after completing PB HLTH 252A. A deficient grade in PB HLTH W252A may be removed by taking PB HLTH 252A.

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Balzer

**Formerly known as:** Public Health W252A

## PB HLTH 252B Infectious Disease Modeling 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will lead students through the process of designing mathematical models of infectious diseases, fitting these models to data, and using them as public health tools to design effective control strategies. Examples are drawn from COVID-19, HIV, influenza, Ebola, and mosquito-borne diseases such as malaria and Zika virus. Each class consists of a lecture followed by a computer-based activity to apply the material. Students also work on a project in which they design their own model and use it to answer a specific research question.

### Objectives & Outcomes

#### Course Objectives: 1.

Design compartmental models of infectious diseases,

2.

Understand the role of heterogeneity, especially in sexually-transmitted infectious,

3.

Understand the importance of stochasticity in outbreak modeling,

4.

Estimate parameters, such as the basic reproductive number,  $R_0$ , from epidemiological data,

5.

Fit mathematical models to incidence and prevalence data,

6.

Incorporate interventions into infectious disease models.

### Rules & Requirements

**Prerequisites:** Students should be able to write and interpret ordinary differential equations, and to manipulate beginner-level code in R

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Marshall

## PB HLTH 252C Intervention Trial Design 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Students learn through pre-recorded lectures. There are graded student presentations of final course project to interpret and design clinical and population-level field trials in addition to a written midterm. Topics: formulation of a testable trial hypothesis; identification of appropriate study populations; blinding (including indices for assessment); randomization (including traditional and adaptive); sample size estimation; recruitment strategies; data collection systems; quality control and human subjects responsibilities; adverse effects monitoring; improving participant adherence; use of surrogate outcomes; preparation of a meta-analysis summarizing a group of trials.

### Objectives & Outcomes

**Student Learning Outcomes:** 3) identify whether appropriate steps have been taken to provide transparency in a published Trial;

4) be able to design a basic Intervention Trial in the student's area of interest;

5) prepare a summary meta-analysis for a group of published Trials published on one topic of interest to the student.

: 2) understand and apply basic principles to determine an appropriate sample size for a Trial;

At the completion of the course, students will be able to: 1) critique published Intervention Trials with respect to design and potential sources of bias:

### Rules & Requirements

**Prerequisites:** PBHLTH 250A or equivalent introductory Epidemiology course

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Colford

## PB HLTH 252D Introduction to Causal Inference 4 Units

Terms offered: Spring 2022, Spring 2021, Spring 2020

This course presents a general framework for causal inference using directed acyclic graphs, non-parametric structural equation models, and counterfactuals. Marginal structural models and causal effect estimation using inverse probability of treatment weighting, G-computation, and targeted maximum likelihood are introduced. In two-part presentations, students will define and implement research questions.

### Rules & Requirements

**Prerequisites:** 241 or C240A (can be taken concurrently); 245 or similar course covering multivariable linear and logistic regression analysis; for epidemiology students, 250C, or consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 2-2 hours of lecture, 0-2 hours of discussion, and 2-0 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Petersen

## PB HLTH 252E Advanced Topics in Causal Inference 4 Units

Terms offered: Spring 2025, Spring 2023, Fall 2021

The course will be conducted as a seminar with readings and discussions on a range of more advanced topics. We will cover case-control designs; longitudinal causal models, identifiability and estimation; direct and indirect effects; dynamic regimes (individualized treatment rules); approaches for diagnosing and responding to violations in the positivity assumption. Additional topics may include stochastic interventions, community-based interventions, and Collaborative-TMLE. There will also be some guest lectures and presentations from current students and faculty members.

### Rules & Requirements

**Prerequisites:** Public Health 252D or consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture, 1 hour of discussion, and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Petersen

## PB HLTH 252W Epidemiologic Analysis 4 Units

Terms offered: Fall 2025

This 4-unit course will cover modern quantitative methods relevant to epidemiologic research drawing heavily on concepts covered in PB HLTH 250B. Course topics include generalized linear models, Kaplan-Meier estimation, survival distributions, and models for parametric and semi-parametric survival analysis. We will also cover methods for confounder selection, dose-response modeling, and interaction and effect modification.

### Objectives & Outcomes

**Course Objectives:** Apply the appropriate statistical model to estimate epidemiologic effects of interest.

Articulate necessary assumptions for different methods, and accurately interpret results.

a.

Identify measures of association that can be estimated under various study designs.

d.

Understand analyses presented in epidemiologic literature, and evaluate their soundness.

e.

Follow future developments in epidemiologic research.

### Rules & Requirements

**Prerequisites:** PB HLTH 250B, PB HLTH 241, or consent of instructor

**Credit Restrictions:** Students will receive no credit for PB HLTH W252 after completing PB HLTH 252. A deficient grade in PB HLTH W252 may be removed by taking PB HLTH 252, or PB HLTH 252.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Bradshaw

**Formerly known as:** Public Health W252

## PB HLTH 253B Epidemiology and Control of Infectious Diseases 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

A discussion of major infectious diseases with emphasis on disease surveillance, investigative procedures, and prevention programs.

Emphasis is on current problems in health agencies at a state, national, and international level.

### Rules & Requirements

**Prerequisites:** Prior degree or courses in biomedical sciences and consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Reingold

## PB HLTH 253W Outbreak Investigations 3 Units

Terms offered: Fall 2025

The purpose of this course is to provide students with an overview of outbreak investigations in public health. This course will teach students why and how clusters of illnesses/epidemics are investigated. Methods and approaches required for such investigations will be discussed in detail, using published and unpublished material from the scientific literature.

### Rules & Requirements

**Prerequisites:** Students must be matriculated in the On-campus Online MPH Program in order to enroll in this course

**Credit Restrictions:** Students will receive no credit for PB HLTH W253 after completing PB HLTH 253. A deficient grade in PB HLTH W253 may be removed by taking PB HLTH 253.

**Repeat rules:** Course may be repeated for credit with instructor consent.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Reingold, Enanoria

**Formerly known as:** Public Health W253

## PB HLTH 254 Occupational and Environmental Epidemiology 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Epidemiological methods for designing, conducting, and interpreting epidemiological studies of persons occupationally or environmentally exposed to chemical and physical agents.

### Rules & Requirements

**Prerequisites:** 250A

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** A. Smith

**Formerly known as:** 254B

## PB HLTH 255A Social Epidemiology 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This is a breadth course intended to provide an overview of the field of social epidemiology and its role in understanding the social determinants of population health and health disparities. Given the breadth of social epidemiology, 255A provides a systematic and selective overview of literature covering the history and development of the field, theoretical perspectives and conceptual approaches, major topical areas and current controversies related to theory, research methods and research findings. Principles emphasized throughout the course (ecological model, measurement and causality) will provide a framework for critical analysis and synthesis across content areas. This is not a methods course.

### Rules & Requirements

**Prerequisites:** Consent of instructor. 142, 145, and 250A-250B recommended

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Nuru-Jeter

## PB HLTH 255C Mental Health and Psychopathology 3 Units

Terms offered: Spring 2025, Spring 2021, Spring 2019

This doctoral seminar is designed to provide an understanding of the complex (and often interactive) individual and environmental conditions that increase the risk of psychopathology in individuals across the life span. We will start by learning about general concepts important to an understanding of psychopathology and prevention of psychopathology, including the "biopsychosocial model," "psychological resilience," and different levels of preventive interventions. For each different area of psychopathology, we will consider: a) the core feature of disorder; b) key theory and empirical evidence regarding etiology and course, with a particular emphasis on understanding the range of risk and protective factors on the individual, family, and community level; and c) the implications of etiological understanding for public health efforts to prevent the particular disorder.

### Rules & Requirements

**Prerequisites:** Open to doctoral students or with consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Ozer

## PB HLTH 255D Methods in Social Epidemiology 2 Units

Terms offered: Fall 2022, Spring 2022, Spring 2020

This course is designed to review, evaluate, and apply methods currently used in the field of social epidemiology. The course aims to teach approaches to forming clear research questions, and selecting the best method(s) to answer the questions posed. Initially we will discuss approaches to defining clear and specific research questions. We will then discuss recent controversies around the meaning of questions posed in social epidemiology, and the ability of currently used methods to answer questions in social epidemiology. Finally we will review, evaluate, and apply a range of different methods that are or could be used to answer questions in social epidemiology, again emphasizing the types of questions answered by these methods, and their ability to address the challenges to effectively answering questions in social epidemiology. There will be a mixture of discussion and lecture depending on the topic, with student participation and questions strongly encouraged.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructors:** Ahern, Hubbard

## PB HLTH 256 Human Genome, Environment and Public Health 4 Units

Terms offered: Spring 2019, Spring 2018, Spring 2016

This course will cover basic principles of human/population genetics and molecular biology relevant to understanding approaches to molecular and genetic epidemiology: approaches to genome-wide association studies; application of biomarkers to define exposures; recent developments in genomics, epigenomics and other -omics, including next generation sequencing technology and genomics in personalized medicine and health. Hands-on computer and wet laboratory will provide experience with modern research tools.

### Rules & Requirements

**Prerequisites:** College-level biology course or consent of instructor. Introductory biostatistics recommended

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Barcellos, Holland

## PB HLTH C256 Human Genome, Environment and Public Health 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024, Spring 2023

This introductory course will cover basic principles of human/population genetics and molecular biology relevant to molecular and genetic epidemiology. The latest methods for genome-wide association studies and other approaches to identify genetic variants and environmental risk factors important to disease and health will be presented. The application of biomarkers to define exposures and outcomes will be explored. Recent developments in genomics, epigenomics and other 'omics' will be included. Computer and wet laboratory work will provide hands-on experience.

### Rules & Requirements

**Prerequisites:** Introductory level biology/genetics course, or consent of instructor. Introductory biostatistics and epidemiology courses strongly recommended

**Credit Restrictions:** Students will receive no credit for PB HLTH C256 after completing CMPBIO 156. A deficient grade in PB HLTH C256 may be removed by taking CMPBIO 156.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Barcellos, Holland

**Also listed as:** CMPBIO C256

## PB HLTH C256A Human Genome, Environment and Human Health 3 Units

Terms offered: Spring 2017

This introductory course will cover basic principles of human/population genetics and molecular biology relevant to understanding how data from the human genome are being used to study disease and other health outcomes. The latest designs and methods for genome-wide association studies and other approaches to identify genetic variants, environmental risk factors and the combined effects of gene and environment important to disease and health will be presented. The application of biomarkers to define exposures and outcomes will be explored. The course will cover recent developments in genomics, epigenomics and other 'omics', including applications of the latest sequencing technology and characterization of the human microbiome.

### Rules & Requirements

**Prerequisites:** Introductory level biology course. Completion of introductory biostatistics and epidemiology courses strongly recommended and may be taken concurrently

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Barcellos, Holland

**Also listed as:** CMPBIO C256A

## PB HLTH C256B Genetic Analysis Method 3 Units

Terms offered: Prior to 2007

This introductory course will provide hands-on experience with modern wet laboratory techniques and computer analysis tools for studies in molecular and genetic epidemiology and other areas of genomics in human health. Students will also participate in critical review of journal articles. Students are expected to understand basic principles of human/population genetics and molecular biology, latest designs and methods for genome-wide association studies and other approaches to identify genetic variants, environmental risk factors and the combined effects of gene and environment important to human health. Students will learn how to perform DNA extraction, polymerase chain reaction and methods for genotyping, sequencing, and cytogenetics.

### Rules & Requirements

**Prerequisites:** Introductory level biology course. Completion of introductory biostatistics and epidemiology courses strongly recommended and may be taken concurrently with permission. PH256A is a requirement for PH256B; they can be taken concurrently

### Hours & Format

**Fall and/or spring:** 15 weeks - 2-2 hours of lecture and 1-3 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Barcellos, Holland

**Also listed as:** CMPBIO C256B

## PB HLTH 257 Outbreak Investigation 2 Units

Terms offered: Spring 2025, Fall 2024, Fall 2023

This course will teach students why and how clusters of illnesses/epidemics are investigated. Methods and approaches required for such investigations will be discussed in detail, using published articles from the scientific literature to provide examples.

### Rules & Requirements

**Prerequisites:** 250A, 250B, or an equivalent introductory course in epidemiologic methods

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructor:** Reingold



## PB HLTH 257W Public Health Preparedness and Emergency Response 3 Units

Terms offered: Fall 2025

This one semester course is an intensive introduction to public health emergency preparedness and response, and covers the following topic areas: the role of public health in disasters; natural disasters and severe weather; intentional mass threats (CBRNE); biosurveillance: detecting and monitoring public health threat; post-disaster sampling, surveys, and rapid needs assessments; public health emergency incident management systems; emergency operations planning and exercises.

### Rules & Requirements

**Prerequisites:** Completion of one semester of graduate public health curriculum, or in public health practice

**Credit Restrictions:** Students will receive no credit for PB HLTH W257 after completing PB HLTH 257. A deficient grade in PB HLTH W257 may be removed by taking PB HLTH 257.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

**Summer:** 7 weeks - 6 hours of lecture per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Aragon

**Formerly known as:** Public Health W257

## PB HLTH 258 Cancer Epidemiology 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

For students with a basic understanding of epidemiology, biostatistics, and tumor biology. An introduction to the epidemiology of some major site-specific cancers, considering epidemiological approaches to the study of their causation, and implementation will be discussed.

### Rules & Requirements

**Prerequisites:** Public Health 150A or 250A

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Metayer

## PB HLTH 258W Global Health Disaster Preparedness and Response 3 Units

Terms offered: Not yet offered

This course is designed to serve the emerging field of global disaster management. Topics include the analysis of past mega-disasters; global disaster trends; hazard identification, profiling, and analysis; concepts of risk and vulnerability and risk evaluation; structural and non-structural mitigation; multi-level disaster preparedness; pre-, peri-, and post-disaster response, including the provision of water, food, and shelter, and the management of volunteers; components of recovery, disaster effects on communities and societies; participation of governmental, non-governmental, and multilateral agencies and organizations in planning and response; role of the media, including social media.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W258 after completing PB HLTH 258. A deficient grade in PB HLTH W258 may be removed by taking PB HLTH 258.

**Repeat rules:** Course may be repeated for credit under special circumstances: if receive D or F grades

### Hours & Format

**Summer:** 6 weeks - 7 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Gershon

**Formerly known as:** Public Health W258

## PB HLTH 260A Principles of Infectious Diseases 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course presents general principles of microbial interactions with humans that result in infection and disease. Common themes are developed using examples of viral, bacterial, and parasitological pathogens that exemplify mechanisms of infectious disease. The epidemiology, pathogenesis, host immune response, diagnosis, treatment, and control will be presented for each infectious disease discussed.

### Rules & Requirements

**Prerequisites:** Upper division course preparation in biology

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Riley, Swartzberg

## **PB HLTH 260B Principles of Infectious Diseases 4 Units**

Terms offered: Spring 2021, Fall 2020, Spring 2020

This course presents general principles of microbial interactions with humans that result in infection and disease. Common themes are developed using examples of viral, bacterial, and parasitological pathogens that exemplify mechanisms of infectious disease. The epidemiology, pathogenesis, host immune response, diagnosis, treatment, and control will be presented for each infectious disease discussed.

### **Rules & Requirements**

**Prerequisites:** Upper division course preparation in biology

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Swartzberg

## **PB HLTH 260E Molecular Epidemiology of Infectious Diseases 2 - 3 Units**

Terms offered: Fall 2022, Fall 2020, Fall 2018

The course will cover general principles and practical approaches in the use of molecular laboratory techniques to address infectious disease epidemiologic problems. It is designed for students with experience in the laboratory or in epidemiology, but not both. The principles to be discussed will include the use of molecular techniques in outbreak investigations, characterizations of dynamics of disease transmission, identifying vehicles, and quantifying attributable risks in sporadic infections, refining data stratification to assist case-control studies, distinguishing pathovars from non-pathogenic variants of organisms, doing surveillance, and identifying genetic determinants of disease transmissions. 3-units if a five-page paper completed.

### **Rules & Requirements**

**Prerequisites:** 150A

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of lecture and .5 hours of discussion per week

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Riley

## **PB HLTH 260F Infectious Disease Research in Developing Countries 2 Units**

Terms offered: Spring 2025, Spring 2023, Fall 2021

The objective of this course is to provide M.P.H. and Ph.D. students with an appreciation and understanding of the complex issues involved in conducting scientific, laboratory-based investigation in developing countries. We will discuss the many obstacles to establishing and sustaining research projects, such as poor infrastructure, insufficient financial and material resources, and lack of scientific information and interaction. More importantly, we will identify innovative solutions to overcoming these obstacles. The first half of the course will consist of presentations by U.S. and developing countries investigators who have long-term research experience in Latin America, Asia, and Africa. We will also discuss related issues such as ethical considerations, equitable collaborations, research capacity strengthening. During the second half of the course, students will give presentations on topics of their choice.

### **Hours & Format**

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

### **Additional Details**

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Harris

## PB HLTH 260W Infectious Diseases 3 Units

Terms offered: Fall 2025

The purpose of this course is to provide students with knowledge and approach to understand key principles that apply to infectious diseases recognized to be of major public health importance in the USA and globally. The students will learn about the important infectious disease issues and obstacles that arise at the population level, and how to address them through science, public health practices, and policy.

### Objectives & Outcomes

#### Student Learning Outcomes: 1.

understand definitions used in discussing, describing, and reporting about infectious diseases.

2.

understand US and WHO-recommended immunization practices and policies, as well as common obstacles to their universal implementation.

3.

propose new ideas about how to address obstacles related to immunization policies; challenges in developing new vaccines.

4.

know about the major drug-resistant infectious disease problems in the US and abroad; factors that select for drug resistance, and what needs to be done to prevent and control the spread of drug-resistant infections.

5.

describe hospital infection surveillance systems; hospital infection control stewardship principles.

6.

understand the rationale behind screening tests for HIAIDs and other STIs.

7.

describe approaches to hepatitis screening, blood donation and blood bank screening for hepatitis viruses; differences in TB contact tracing programs in the US and elsewhere; BCG vaccination vs preventive treatment for latent TB infection in the USA.

### Rules & Requirements

**Prerequisites:** Students must be matriculated in the On-campus Online MPH Program to enroll in this course

**Credit Restrictions:** Students will receive no credit for PB HLTH W260 after completing PB HLTH 260. A deficient grade in PB HLTH W260 may be removed by taking PB HLTH 260.

**Repeat rules:** Course may be repeated for credit with instructor consent.

### Hours & Format

**Fall and/or spring:** 7 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Swartzberg

**Formerly known as:** Public Health W260

## PB HLTH 262 Molecular and Cellular Basis of Bacterial Pathogenesis 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

This course for graduate students will explore the molecular and cellular basis of bacterial pathogenesis. The emphasis will be on model bacterial pathogens of mammals. The course also will include some aspects of bacterial genetics and physiology, immune response to infection, and the cell biology of host-parasite interactions. Taught concurrently with. Students enrolled in 262 also will be required to attend a weekly discussion of the primary literature, both current and classic. Each student will be required to present one paper.

### Rules & Requirements

**Prerequisites:** 260A, 260B, or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Portnoy

## PB HLTH 263 Public Health Immunology 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will be the principal immunology course for students in the field of public health. It is designed to teach both the basic biology of the human immune system and its response in health and disease, especially the specific response of the human immune system to major human pathogens. Four areas will be explored: 1) components of the immune system (spectrum of cell types and cell products); 2) different arms of the immune system including humoral, cell-mediated, innate, and mucosal immunity; 3) specific immune response to infection caused by viral, bacterial, fungal, and parasitic pathogens; and 4) disorders of the immune system unrelated to infectious disease. Through this course, students should not only gain a basic understanding of the human immune system, but also learn the functions and responses of the human immune system to diseases of infectious and non-infectious nature, and the relevance of these interactions in the context of public health problems.

### Rules & Requirements

**Prerequisites:** 260A (prior or concurrent). Graduate standing. Public Health majors by consent of instructor

**Credit Restrictions:** Students will receive no credit for 263 after taking Molecular and Cell Biology 150.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Stanley

## PB HLTH 264 Capstone Seminar in Infectious Diseases and Vaccinology 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Examination of scientific, social, and policy dimensions of issues involving infectious diseases. Students select one topic for in-depth analysis and present findings in a public debate. Topics vary from year to year.

### Rules & Requirements

**Prerequisites:** Second-year Infectious Diseases MPH students only

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Liu

**Formerly known as:** 264A-264B

## PB HLTH 265 Molecular Parasitology 3 Units

Terms offered: Fall 2025, Fall 2023, Fall 2021

Advanced course in the molecular aspects of parasite immunology, molecular biology, genetics, biochemistry, and genomics. For each parasite, the following areas will be covered: biology; disease spectrum; epidemiology; pathogenesis, immunology; and vaccine development. The lectures will focus on "state-of-the-art" research in relation to molecular mechanisms of pathogenesis, parasite adaptations for survival within the host, and strategies for drug and vaccine development and disease control and prevention. Course content will rely heavily on current literature.

### Rules & Requirements

**Prerequisites:** Upper division courses in molecular biology, parasitology, biochemistry, immunology, microbiology, or consent of instructor. Familiarity with reading primary research is recommended

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

### Hours & Format

**Fall and/or spring:** 10 weeks - 3 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Harris

## PB HLTH 266A Foodborne diseases 2 Units

Terms offered: Spring 2019, Fall 2016, Fall 2015

This course will cover public health, microbiological, social, and economical issues related to foodborne diseases. Three areas will be explored: 1) categories, clinical manifestations, and disease processes of foodborne illnesses; 2) etiological agents causing foodborne illnesses; 3) investigation and prevention of foodborne illness. The course will discuss different types of foodborne diseases, clinical manifestations, and the interactions between etiological agents (pathogens and non-pathogens) and human hosts. We will cover pathogens that are the most frequently associated with foodborne illness including bacterial and viral pathogens such as Salmonella, E coli, hepatitis viruses and Norwalk-like gastroenteritis viruses. We will also study non-pathogen agents such as heavy metal, pesticide, and toxic chemicals. Furthermore, the course will discuss how to identify the etiological agents in outbreaks and possible measures that can be taken to minimize the risk to the public including vaccines and education. Finally, we will explore the social and economic issues involved in the food production, distribution, and consumption that contribute to foodborne diseases.

### Rules & Requirements

**Prerequisites:** Basic knowledge of microbiology

### Hours & Format

**Fall and/or spring:** 15 weeks - 1.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Lu

## PB HLTH 266B Zoonotic Diseases 2 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

This is a graduate (Ph.D. and MPH) level course designed to describe the major zoonoses and their life cycle, disease manifestations, epidemiology, and methods for prevention and control. Available treatments, diagnostics, and public health and agriculture surveillance and “forecasting” programs will also be discussed. The most recent research on the molecular and cellular basis of the mechanisms and consequences of the “species” jump from other animals to humans will be reviewed. The global nature of zoonotic diseases and the integration of multiple disciplines (molecular biology, immunology, epidemiology, evolutionary biology, ecology, animal science, veterinary medicine, etc.) will be emphasized.

### Objectives & Outcomes

**Course Objectives:** Recognize, understand and be able to describe the public health importance of presented zoonotic diseases  
Understand the agent’s life cycle (agent, host, and environment interaction), including the source(s) or reservoir(s) and host range  
Understand the factors involved in the susceptibility and resistance of the human host to the cross-species transmission of disease

### Rules & Requirements

**Prerequisites:** Public Health 260A or equivalent Infectious Diseases course (may be taken concurrently)

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Dailey

## PB HLTH 266C Healthcare-Associated Infections 2 Units

Terms offered: Fall 2024, Fall 2023, Fall 2022

This course will examine the principles underlying the control of infections in healthcare facilities (the emphasis will be on hospitals), the causes of these infections, current important topics in this field, and future trends. Students will develop an understanding of the national and local programs involved in healthcare-associated infections (HAI's), the major causes of HAI's antimicrobial stewardship, specific agents and procedures causing HAI's and how to prevent HAI's.

### Objectives & Outcomes

**Course Objectives:** 1) Understand the public health impact of HAIs.  
2) Know the important causes of HAIs.  
3) Formulate a plan to address each of the causes.  
4) Address in-depth one important issue about HAIs.

**Student Learning Outcomes:** At the conclusion of the course, students will understand the public health import of HAIs, why they occur, and what to do to prevent them. They will also appreciate how we obtain and process the data that informs our interventions.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructor:** Swartzberg

## PB HLTH 266D Homelessness and the Public's Health 2 Units

Terms offered: Spring 2023

Homelessness is an epidemic in the United States affecting more than 500,000 people each day. It impacts people of all races, age, and family situations, and it has enormous consequences for physical and mental health. There is no single cause, and no single solution. The focus of this course is the relationship between homelessness and health. We will discuss the range of causes for homelessness and how each of these is correlated to individual health, public health, public policy, and the law. We will explore various strategies and approaches through readings, guest lecturers, and student-led discussions.

### Objectives & Outcomes

#### Course Objectives: •

Develop plans to address this important public health problem.

•

Understand the consequences of homelessness on an individual's health

•

Understand the obstacles to addressing homelessness

•

Understand the root causes of homelessness and various strategies to address them

#### Student Learning Outcomes: 1)

Understand the root causes of homelessness and various strategies to address them.

2)

Understand the consequences of homelessness on an individual's health.

3)

Understand the obstacles to addressing homelessness.

4)

Develop plans to address this important public health problem.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructors:** Swartzberg, Davis

## PB HLTH 266E Diagnostics in Infectious Diseases: Development, Regulatory and Implementation Challenges 2 Units

Terms offered: Spring 2025

Diagnostics are indispensable for clinical management and accurate diagnostic tests are the cornerstone of global health programs, but they need to be reviewed and cleared by regulatory authorities before they can be used. Class reviews domestic and global regulatory oversight and explores how tests are marketed around the world. Students will learn about the challenges to innovation generalizability, steps in design and development, technical requirements and clinical validity/utility, and reimbursement. Topics include regulatory pathways, risk stratification, changing regulatory landscape, performance metrics, common mistakes to be avoided, appropriate statistics and strategies to bring a test from lab bench to clinical practice.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Miller

## PB HLTH 267B Characterization of Airborne Contaminants 4 Units

Terms offered: Spring 2025, Spring 2023, Spring 2021

Principles underlying the use of air monitoring methods in industry and the environment. Topics include behavior of gases, vapors, and aerosols; mechanisms of absorption and elimination of inhaled toxicants; methods for measuring of airborne chemicals and particles.

### Rules & Requirements

**Prerequisites:** Graduate standing in environmental health sciences or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Hammond



## PB HLTH 267W Applied GIS for Public Health Practice 3 Units

Terms offered: Not yet offered

This course will familiarize students with the principles, methods, and techniques necessary to apply Geographic Information Systems (GIS) in diverse public health practice settings. Case studies will be presented to introduce the application of GIS technologies for rendering disease surveillance maps, developing effective spatial data visualization, creating compelling and credible spatial risk maps, and acquiring and processing positioning information for health applications.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W267 after completing PB HLTH 272B, PB HLTH 277, or PB HLTH 267. A deficient grade in PB HLTH W267 may be removed by taking PB HLTH 272B, PB HLTH 277, PB HLTH 272B, PB HLTH 277, or PB HLTH 267.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Smith

**Formerly known as:** Public Health W267

## PB HLTH 268W Water, Sanitation and Hygiene (WaSH) for Health and Development 3 Units

Terms offered: Not yet offered

This course is designed for students who may be interested in working in countries where contaminated water, inadequate sanitation and poor hygiene (WaSH) are the cause of serious health problems. In this course, important concepts in WaSH will be covered so that students can understand what is needed to develop, implement, monitor and evaluate a WaSH program. It emphasizes concepts that are needed to develop effective, appropriate, accessible and affordable WaSH interventions to reduce the global burden of disease.

### Objectives & Outcomes

#### Course Objectives: 1.

Identify major water, sanitation and hygiene hazards and understand how hazards differ between different countries, watersheds, climates, cultures and regions.

2.

Describe key social determinants of health that drive WaSH inequities

3.

Understand the primary WaSH interventions that have been shown to be effective at reducing morbidity and mortality

4.

Conduct vulnerability assessments of community supplies of water and sanitation systems to assess ability to provide essential services.

5.

Describe the relationship between WaSH technologies, behavioral change communications and the enabling environment and how the three must work in tandem to result in sustained improvements.

6.

Critically analyze WaSH-related issues associated with rapid growth of urban populations in developing countries.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W268 after completing PB HLTH 268. A deficient grade in PB HLTH W268 may be removed by taking PB HLTH 268.

### Hours & Format

**Summer:** 7 weeks - 5.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Graham, Jain

**Formerly known as:** Public Health W268

## PB HLTH 269AW Introduction to Physical Ergonomics 3 Units

Terms offered: Not yet offered

Students will identify the components of occupational tasks that contribute to musculoskeletal injury, quantify the risks using the most relevant ergonomic assessment tools, and integrate that information into conclusions regarding the acceptability of the risk. This course will challenge students to assess many practical examples from a wide variety of workplace sectors, including manufacturing, health care, agriculture and others, and interpret data from sources that will not always agree, so that the decisions can be made and defended.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W269A after completing PB HLTH 269A. A deficient grade in PB HLTH W269A may be removed by taking PB HLTH 269A.

### Hours & Format

**Fall and/or spring:** 7 weeks - 8-5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Harris Adamson, Potvin, Janowitz

**Formerly known as:** Public Health W269A

## PB HLTH 269C Occupational Biomechanics 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Overview of ergonomics and occupational biomechanics. Course covers pathophysiology and risk factors of upper extremity and back musculoskeletal disorders, biomechanics of spine and upper extremity loading at work, measurement of force and posture, models for risk assessment, anthropometry applied to task and workstation design, tool design, and structure of successful ergonomics programs. Students will conduct a detailed job analysis and design a workplace intervention.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Rempel

## PB HLTH 269D Ergonomics Seminar 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Readings and lectures in occupational biomechanics. Topics to be covered are muscle, tendon, and joint biomechanics, material handling models, mechanisms of injury, hand tool design, and instrumentation issues. Students will prepare critical reviews of recent publications and design an engineering intervention to reduce work-related risk factors.

### Rules & Requirements

**Prerequisites:** 269C or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Rempel

## PB HLTH 269E Current Topics in Environmental Medicine 2 - 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2022

Topics in environmental medicine will provide students with an overview of the health impacts, disease mechanisms, and public health controversies related to selected environmental exposures.

The course will cover established environmental diseases as well as impacts of some emerging exposures of concern. The focus will primarily be on pathophysiology, issues related to exposure pathways, and the susceptibilities of specific human populations. No prior medical knowledge required.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Harrison, Seward

## PB HLTH 270 Introduction to Environmental Health Sciences 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This survey course covers the breadth of hazards to chemical, biological, and physical agents of concern to environmental health professionals. Lectures are presented by experts on particular topics that emphasize the activities involved in professional practice. Students will also meet twice monthly with the instructor to discuss advanced readings and assignments related to the lecture topics. Students will conduct a project on a topic of current interest in some aspect of environmental health (under the guidance of the instructor). This course is designed for MPH students in Environmental Health Sciences and other graduate-level students interested in an overview course on environmental health.

### Rules & Requirements

**Prerequisites:** One epidemiology course; one biostatistics course (may be taken concurrently). One Epidemiology course; one Biostatistics course, can be concurrent.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Balmes

## PB HLTH 270A Exposure Assessment and Control 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Direct and indirect methods and procedures for the estimation and control of human exposure to chemical, physical, and biological agents of concern to health in the community and in occupational settings. Includes review of measurement technologies, exposure assessment strategies, and multipathway analyses used by regulatory agencies. Also covers exposure control options and strategies, including administrative procedures, personal protective equipment, and various engineering control approaches.

### Rules & Requirements

**Prerequisites:** Graduate standing in the School of Public Health or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Nicas, Spear

## PB HLTH 270B Toxicology I 3 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

Introduction to toxicology covering basic principles, dose-response, toxicity testing, chemical metabolism, mechanisms of toxicity, carcinogenesis, interpretation of toxicological data for risk assessment, and target organ toxicity.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** M. Smith

## PB HLTH 270C Practical Toxicology 2 Units

Terms offered: Spring 2019, Spring 2017, Spring 2016

This course will focus on cutting-edge issues involving real-world toxicology in drug discovery, pesticide regulation, stem cell research, etc. Many well-known toxicologists, regulators, and consultants from pharmaceutical companies, petroleum industry, private consulting firms, non-profit institutes, federal and state regulatory agencies in the Bay Area will be invited to talk to our participating students. Some of the speakers are our school's alumni who understand exactly what our students need to know before entering the real world. Learning outside the classroom will be another major focus and different from other existing toxicology courses offered at Berkeley. This new class will provide students a chance to visit some of the real-world sites allowing students to see and feel what they really need to know and to learn. To better prepare our students for the real world, we will use combined teaching/learning styles including lecture with discussion sections, site-visits, hand-on experience in a toxicology laboratory, and student group assignments or projects.

### Rules & Requirements

**Prerequisites:** 270B or Nutrition Science and Toxicology 110 or equivalent course in toxicology

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Zhang

## PB HLTH 271C Drinking Water and Health 3 Units

Terms offered: Spring 2022, Spring 2021, Spring 2020

The course covers monitoring, control and regulatory policy of microbial, chemical and radiological drinking water contaminants. Additional subjects include history and iconography of safe water, communicating risks to water consumers and a bottled water versus tap water taste test as part of the discussion on aesthetic water quality parameters.

### Objectives & Outcomes

**Student Learning Outcomes:** By the end of this course, students will be expected to:

Recognize the global occurrence of waterborne contaminants and related health impacts.

Understand water quality monitoring and control of key water quality constituents.

Appreciate the complexities of the regulatory process as it pertains to public drinking water systems in the US and abroad.

Read and synthesize published and unpublished sources of information regarding drinking water and health. Prepare a literature review in journal submission format.

Using an established rubric, review and comment on a literature review (prepared by a fellow student). Rank the paper as acceptable, acceptable with minor revision, acceptable with major revision, unacceptable.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Smith

## PB HLTH C271G Health Implications of Climate Change 3 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018, Spring 2017, Spring 2016, Spring 2015

The course will provide a basic foundation in the physical mechanisms of, responses to, and health implications of climate change. We will explore the variety of epidemiologic, risk assessment, and statistical methods used to understand the impacts of climate change on health across diverse demographic groups. The public health implications, positive and negative, of efforts to mitigate and adapt to climate change will be elaborated, including discussions of ethical, political, and economic aspects of these efforts. Students will be responsible for leading class discussions and presenting a poster on their choice of a topic related to climate change and health.

### Rules & Requirements

**Prerequisites:** The material will be presented with minimal expectation of a background in physical science, although some additional reading may be needed for students with no university science courses. A background in epidemiology is also helpful, but not necessary

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Jerrett, Morello-Frosch

**Also listed as:** ESPM C282

## PB HLTH 271E Science and Policy for Environment and Health 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Scientific knowledge and analyses are important to the development of public policies that address the impact of the environment on health. The limits of existing knowledge and uncertainties in research results create significant challenges in applying science to answer critical questions. This course critically examines how scientific information is used in policy decisions. Case studies of current issues address characterization of scientific knowledge, interpretation of science in policy contexts, scientific integrity, and factors in addition to science that influence decisions. Assignments prepare students to effectively translate technical knowledge for multi-disciplinary and lay audiences and to participate in public policy proceedings. Core materials address differences between regulatory and market-based approaches; emerging paradigms including the precautionary principle and environmental justice; and key elements of risk assessment and cost-benefit analysis.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Kyle

## PB HLTH 271G Health Implications of Climate Change 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course explores the Public Health effects of global climate change: physical basis of climate change, including causes & projections; burden of disease stemming from global climate change, emphasis on impacts in the developing world, global & local equity issues, interaction between climate change mitigation/adaptation activities & existing global health initiatives; direct exposures (extreme heat, drought, precipitation, sea-level rise), indirect exposures (vector-borne & zoonotic diseases, ecosystem disruption, water quantity & quality, land arability & food production, population displacement). After taking this course, students will be well positioned for further work on global environmental change and health.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Remais

## PB HLTH 271H Greener Solutions: A Safer Design Partnership 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

At the same time as chemistry has dramatically improved our lives, it has also exposed people to synthetic chemicals and pollutants via air, water, food, consumer products and workplaces. While government agencies work to assess and control chemical hazards, communities, workers and advocacy groups are demanding safer materials, and businesses are actively seeking to eliminate hazardous chemicals from their products and supply chains. Green chemistry aims to develop products and materials that are inherently safer for human health and the environment. The Greener Solutions course pairs interdisciplinary teams of graduate students with a partner organization seeking to solve these challenges in a specific application.

### Rules & Requirements

**Prerequisites:** Graduate standing or advanced undergraduate with permission. General chemistry and organic chemistry or equivalent knowledge

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Schwarzman, Hart-Cooper

## PB HLTH 271J Social Justice and Worker Health 2 Units

Terms offered: Fall 2024, Fall 2022

Course is an overview on work as a key social determinant of health. The workplace is commonly viewed as a setting for health promotion of individual behavior change, while its potential to be a source of critical exposures that directly impact health, safety & well-being of working populations is often overlooked. Purpose of the class is to help public health practitioners build a framework for understanding the role that work & workplace conditions play in individual & community health, to introduce strategies that address work-related health inequities & facilitate the development of concrete skills in these areas. The course emphasizes worker & community organization & participation in effecting social justice & public health change.

### Objectives & Outcomes

**Student Learning Outcomes:** Define the concept of a healthy job, and describe work as a social determinant of health with an emphasis on its impact on the lives of low-wage, immigrant, and other vulnerable workers and communities.

Describe the “landscape” of work and labor dynamics, including current issues and topics in worker health and safety and the populations most affected by workplace hazards and risks.

Discuss basic theoretical and experiential concepts underlying the following public health strategies:

- #
- Community organizing
- #
- Labor organizing
- #
- Training for action
- #
- Effective partnerships
- #
- Work-related policies

Practice skills in community organizing, popular education, training for action, and building effective partnerships that are all essential to professional community-based practice in public health.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Teran, Chang

## PB HLTH 271K Introduction to Data Management and Programming in SAS for Public Health 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This class is an introduction to the use of the SAS programming language for managing, cleaning and analyzing biomedical data.

### Objectives & Outcomes

**Course Objectives:** By the end of this course, students should be able to write SAS programs for data management, cleaning, and analysis

**Student Learning Outcomes:** Create and run SAS programs

- #
- Create new variables from other data.
- #
- Export SAS datasets
- #
- Manipulate and transform data
- #
- Read raw input files in various formats and create SAS datasets.
- #
- Use SAS procedures for basic statistical inference: Chi-square tests, T-Tests, Correlations, Linear Regression, etc.
- #
- Use basic SAS procedures to describe data numerically and graphically.
- #
- Work with SAS datasets: sort, subset, merge, and re-format SAS datasets

### Rules & Requirements

**Prerequisites:** It is expected that students will have taken introductory courses to both biostatistics and epidemiology (PBHLTH 142 or PBHLTH W142; PBHLTH W250A, PBHLTH 250B or PBHLTH W250, PBLTH W250F/G)

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Costello



## PB HLTH 272AW Introduction to Geographic Information Systems for Public Health 3 Units

Terms offered: Not yet offered

This course introduces geographic information systems (GIS) for the processing, visualization and description of spatial public health data. We will introduce principles, methods, and techniques for acquiring, processing, and manipulating spatial data. We will cover basic GIS concepts, such as coordinate systems and cartography, layering, buffering, joining spatial data, and conducting spatial queries. The role of locational information in aiding in the prevention of disease will be covered and discussed.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W272A after completing PB HLTH 272A. A deficient grade in PB HLTH W272A may be removed by taking PB HLTH 272A.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Casey, Midekisa

**Formerly known as:** Public Health W272A

## PB HLTH 272CW Applied Spatial Data Science for Public Health 3 Units

Terms offered: Not yet offered

This course will cover the theory and methods behind the analysis of patterns of health and disease in space. Students will increase their proficiency in the application of Geographic Information Systems (GIS) to public health data, and will learn how to perform a wide variety of space and space-time analyses. The course will introduce statistical techniques for describing, analyzing and interpreting layers of mapped health data, including the acquisition and classification of remote sensing data.

### Objectives & Outcomes

**Course Objectives:** Apply appropriate spatial statistics to diverse locational data;

Describe several statistical techniques useful for analyzing and interpreting mapped data in public health applications;

Describe the rationale for geographical analysis and spatial epidemiology;

Formulate a research question that is answerable using spatial techniques;

Identify strengths and weaknesses of mapped data and spatial analyses;

Provide examples of impactful spatial analyses from the literature;

Report results of spatial analyses in a manner that is clear and understandable to both technical and non-technical audiences.

### Rules & Requirements

**Prerequisites:** Completion of PBHLTH W272A or permission of instructor is required to enroll in this course. Furthermore, this course requires extensive use of R. At least 50 hours of experience programming in R is strongly recommended. Similarly, this course will cover spatial regression analysis. As such, students are expected to be familiar with general linear regression

**Credit Restrictions:** Students will receive no credit for PB HLTH W272C after completing PB HLTH 272C. A deficient grade in PB HLTH W272C may be removed by taking PB HLTH 272C.

### Hours & Format

**Fall and/or spring:** 8 weeks - 6 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Readhead

**Formerly known as:** Public Health W272C

## PB HLTH 273 Environmental Determinants of Infectious Disease 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The course takes a global perspective, examining the environmental phenomena that influence the transmission of infectious diseases. The epidemiological significance of environmental processes are explored, including weather, climate extremes, hydrology, development projects, and land usage change. Analytical tools are discussed and critiqued with respect to their ability to resolve the role of environmental factors in shaping disease distributions and pathogen fate, transport, and persistence.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Remais

## PB HLTH 275 Current Topics in Vaccinology 2 Units

Terms offered: Fall 2025, Fall 2024, Spring 2018

This is an advanced level course designed to cover current issues related to the biological and analytical aspects of vaccine development and utilization. Latest developments in recombinant vaccine technology, vaccine delivery systems, "naked DNA" vaccines, "designer" vaccines, new adjuvants, anti-tumor vaccines, epidemiological approaches to assess vaccine efficacy, effectiveness, and safety will be discussed and covered.

### Rules & Requirements

**Prerequisites:** 250A, 260A, and 264 or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Riley, Enanoria

## PB HLTH 277A GIS and Spatial Analysis for Health Equity 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The goal of this course is to acquire the knowledge and skills needed to approach public health problems from an equity or health justice perspective. Students will acquire mapping and spatial analysis (spatial epidemiology) skills and apply them in the context of structural inequity, health disparities, and racial justice. Geospatial skills are applied to public health problems that demonstrate differences in health exposures, risks, and adverse outcomes for BIPOC or economically disadvantaged individuals living in the US as well as those in low and medium income countries as compared to high income countries.

### Objectives & Outcomes

**Course Objectives:** Communicate information related to an important health issues including their geographic and demographic contexts.

# How: Use the ESRI StoryMap Builder to incorporate short narratives, maps, infographics, and images into a web-based interactive communication tool.

Demonstrate the ability to design, implement, and apply spatial data to determine and display relative prevalence of diseases.

# How: Create maps and perform kernel density and cluster/hot spot analysis for a specific disease

# How: Create a dashboard to illustrate the location and incidence of disease cases

Illustrate how maps were used to contribute to structural racism by relating historic redlining maps to current health inequities.

# How: Create a social vulnerability index from demographic and health indicators, and map the index by county

# How: Compare a current map that illustrates social vulnerabilities to historic redlining maps from the Federal Housing Administration.

Illustrate the limitations of political boundaries (census areas, cities, counties), in predicting disease prevalence, and equity issues associated with health risks.

# How: Use appropriate classification schema to overcome the "Modifiable Areal Unit Problem"

Predict concentrations of an environmental contaminant where data are missing

# How: Use Kriging to interpolate values in an area that has some missing data.

Report survey data cartographically.

# How: Develop and execute a geo-enabled survey on a public health issue

# How: Create an interactive map of survey results

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 277A after completing PB HLTH 177A. A deficient grade in PB HLTH 277A may be removed by taking PB HLTH 177A.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1.5 hours of lecture and 3 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Smith

## PB HLTH 278 Health Policymaking and 4+1 Competency Development 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course will provide 4+1 MPH students with a “homeroom,” a space to grow as a cohort, meet outstanding competencies, and be introduced to the internship process. The lion share of competencies addressed will be in Advocacy and Policymaking.

### Objectives & Outcomes

#### Course Objectives: 1.

Compare the organization, structure and function of health care, public health, and regulatory systems across national and international settings.

2. Explain basic principles and tools of budget and resource management.

3. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence.

4. Evaluate policies for their impact on public health and health equity.

5. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.

6. Advocate for political, social, or economic policies and programs that will improve health in diverse populations.

7. Communicate audience-appropriate public health content, both in writing and through oral presentation.

8. Apply systems thinking tools to a public health issue.

### Rules & Requirements

**Prerequisites:** 4+1 Student in first semester of program

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Flagg

## PB HLTH 281 Public Health and Spirituality 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course presents a brief introduction to the emerging field of spirituality and health. We examine scholarly and scientific views of links between spirituality, religion, and health. Topics include highlights and overviews of the rapidly emerging scientific evidence base, public health relevance, collaborations with faith-based organizations, and other practical applications.

### Rules & Requirements

**Prerequisites:** Completion or concurrent enrollment in at least one other course in public health, or consent of instructor

### Hours & Format

**Fall and/or spring:** 10 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Oman

## PB HLTH 285A Public Health Injury Prevention and Control 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Injuries are a major and often neglected health problem with substantial human and economic costs. Injuries are the leading cause of death from the first year of life to age 45, and the leading cause of lost potential years of life. This course provides an historical and conceptual framework within which to consider injuries (both intentional and unintentional) as social, and public health problems. Through review of epidemiology and intervention studies, course work will consider the causes and consequences of traumatic injury within developmental, social and economic contexts. Particular emphasis is placed on alternative strategies for injury prevention and on the relative benefits of intervention at different levels.

### 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:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Ragland

## PB HLTH C285 Traffic Safety and Injury Control 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course applies principles of engineering, behavioral science, and vision science to preventing traffic collisions and subsequent injury. A systematic approach to traffic safety will be presented in the course, and will include (1) human behavior, vehicle design, and roadway design as interacting approaches to preventing traffic crashes and (2) vehicle and roadway designs as approaches to preventing injury once a collision has occurred. Implications of intelligent transportation system concepts for traffic safety will be discussed throughout the course.

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Ragland

**Also listed as:** CIV ENG C265

## PB HLTH 288C Preventive Medicine Residency Seminar: Managed Care and Preventive Medicine 1 Unit

Terms offered: Spring 2025, Spring 2024, Spring 2023

This seminar is required for preventive medicine residents, but is also open to other physicians and medical students interested in preventive medicine and public health practice. It provides an overview of preventive medicine practice, especially those areas covered by the American Board of Preventive Medicine examination in public health and preventive medicine. The objectives of this seminar are to review basic principles and practices of health care organization and financing, quality assurance, clinical practice guidelines, clinical preventive services and health care delivery for the underserved and to describe the role of the preventive medicine physician in health care organizations.

### Rules & Requirements

**Prerequisites:** MD or medical student

**Credit Restrictions:** Two hours of seminar per week for eight weeks.

### Hours & Format

**Fall and/or spring:** 8 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Rutherford, Seward

## PB HLTH 288D Preventive Medicine Residency Seminar: Public Administration 1 Unit

Terms offered: Spring 2025, Spring 2024, Spring 2023

This seminar is required for preventive medicine residents, but is also open to other physicians and medical students interested in preventive medicine and public health practice. It provides an overview of preventive medicine practice, especially those areas covered by the American Board of Preventive Medicine examination in public health and preventive medicine. The objectives of this seminar are to review basic principles and practices of public administration as they relate to the management of a governmental public health agency and to describe the role of the preventive medicine physician as a leader and administrator in those agencies.

### Rules & Requirements

**Prerequisites:** MD or medical student. MD or medical student

**Credit Restrictions:** Two hours of seminar per week for eight weeks.

### Hours & Format

**Fall and/or spring:** 8 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructors:** Rutherford, Seward

## PB HLTH 289W Interdisciplinary Health Seminar 3 Units

Terms offered: Summer 2025 First 6 Week Session

This hybrid seminar course consists of both online and face-to-face instruction, with the objective of mastering, at least partially, the following competencies: basic leadership skills for public health leaders, ability to design and conduct a needs assessment and stakeholder analysis, the ability to critically analyze a public health journal article, the ability to conduct an ethical analysis in public health, basic negotiation skills, and the ability to complete a Human Subjects Protocol (IRB) application.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W289 after completing PB HLTH 289. A deficient grade in PB HLTH W289 may be removed by taking PB HLTH 289.

### Hours & Format

**Fall and/or spring:** 7 weeks - 8 hours of lecture and 4.5 hours of discussion per week

**Summer:** 6 weeks - 8 hours of lecture and 4.5 hours of discussion per week

**Online:** This is an online course.

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Hosang

**Formerly known as:** Public Health W289

## PB HLTH 290 Health Issues Seminars 1 - 4 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Summer 2025 Second 6 Week Session

A discussion of current developments and issues in public health of interest to faculty and students of the department as a whole. Content varies from semester to semester depending upon current issues and interests.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of seminar per week

### Summer:

6 weeks - 1-8 hours of seminar per week

8 weeks - 1-10 hours of seminar per week

10 weeks - 1-8 hours of seminar per week

12 weeks - 1-6 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** The grading option will be decided by the instructor when the class is offered.

## PB HLTH 290AW Public Health Short Seminar 1 - 4 Units

Terms offered: Not yet offered

A discussion of current developments and issues in public health of interest to graduate students of the department as a whole. Content varies from semester to semester depending upon current issues and interests.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH W290A after completing PB HLTH 290A. A deficient grade in PB HLTH W290A may be removed by taking PB HLTH 290A.

**Repeat rules:** Course may be repeated for credit when topic changes. Students may enroll in multiple sections of this course within the same semester.

### Hours & Format

**Fall and/or spring:** 8 weeks - 1.5-4 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Formerly known as:** Public Health W290A

## PB HLTH 290B Health Issues Seminar - Online 1 - 3 Units

Terms offered: Spring 2025, Spring 2023

A discussion of current developments and issues in public health of interest to faculty and students of the department as a whole. Content varies from semester to semester depending upon current issues and interests.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes. Students may enroll in multiple sections of this course within the same semester.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-3 hours of seminar per week

### Summer:

6 weeks - 1-8 hours of seminar per week

8 weeks - 1-8 hours of seminar per week

10 weeks - 1-6 hours of seminar per week

12 weeks - 1-8 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## PB HLTH 290C Changemaker Microcourse 1 Unit

Terms offered: Fall 2025, Spring 2025, Fall 2024

This Changemaker Microcourse will focus on developing critical analysis and practical public health skill building related to making change as a public health professional.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes. Students may enroll in multiple sections of this course within the same semester.

### Hours & Format

**Fall and/or spring:** 5 weeks - 4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## PB HLTH 291 Leadership for Public Health Changemakers 1 Unit

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course helps you find your unique leadership voice and step into your own leadership potential in the field of Public Health by exploring three fundamental questions, no matter your background, experience level, or familiarity to date with leadership. Leadership is multidisciplinary, so our course will draw from fields ranging from engineering to economics to psychology to art, and we'll apply a changemaker lens throughout the semester to help you become a leader ready and able to lead positive change from wherever you are.

### Objectives & Outcomes

**Student Learning Outcomes:** Reflect on your values, vision, and opportunities for leading positive change no matter your role, sector, title, or years of experience.

Analyze key leadership theories, tactics, and models relevant to the field of public health.

Apply leadership principles to address complex public health challenges. Become a Public Health Changemaker.

Develop clarity on the type of leader you hope to become, and the steps necessary to get there.

Develop skills for effective communication, negotiation, and collaboration within public health organizations.

Gain confidence to thrive in highly-dynamic environments where change and disruption are the norm

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for PB HLTH 291 after completing PB HLTH 291. A deficient grade in PB HLTH 291 may be removed by taking PB HLTH 291.

### Hours & Format

**Fall and/or spring:** 7 weeks - 2 hours of lecture per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.



## PB HLTH 291A Preparation for Public Health Practice 2 Units

Terms offered: Spring 2023, Fall 2022, Spring 2022

Series of skills-based workshops and sessions to introduce students to specialized leadership competencies needed in the public health workplace. These workshops complement the School of Public Health's (SPH) core curriculum and are selected based on the Council on Linkages between Academia and Public Health Practice, and regular feedback from public health practitioners, faculty and students. Workshop facilitators include UC Berkeley faculty, public health practitioners and consultants with expertise in the topic areas. Designed to teach the core public health skills relevant to pre-internship preparation and prepare students for professional success. Cases draw on past scenarios/challenges experienced in the PH field.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of workshop and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

## PB HLTH 291C Public Health Leadership 3 Units

Terms offered: Spring 2025

The DrPH Leadership and Practice course is designed to be an interactive series of learning sessions for first and second year students in the DrPH Program at the School of Public Health. The course will give each student an opportunity to develop an understanding of leadership, apply leadership to public health practice, and develop individually as a leader.

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit with advisor consent.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Letter grade.

**Instructor:** Lachance

## PB HLTH 292 Seminars for M.P.H. Students 1 - 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

Current topics and special issues in the health field.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of seminar per week

**Summer:** 6 weeks - 2-10 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** The grading option will be decided by the instructor when the class is offered.

## PB HLTH 293 Doctoral Seminar 1 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Discussion and analysis of dissertation research projects, as well as of conceptual and methodological problems in planning and conducting health research.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of seminar per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** The grading option will be decided by the instructor when the class is offered.

## PB HLTH 297 Field Study in Public Health 1 - 12 Units

Terms offered: Summer 2025 10 Week Session, Fall 2017, Spring 2017  
Supervised experience relevant to specific aspects of public health in off-campus organizations for graduate students. Regular individual meetings with faculty sponsor and written reports required.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-12 hours of fieldwork per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

## PB HLTH 298 Group Study 1 - 8 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-8 hours of independent study per week

#### Summer:

6 weeks - 1-8 hours of independent study per week

8 weeks - 1-8 hours of independent study per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** The grading option will be decided by the instructor when the class is offered.

## PB HLTH 299 Independent Research 1 - 12 Units

Terms offered: Summer 2024 Second 6 Week Session, Spring 2023,

Summer 2016 10 Week Session

Independent study and research.

### Rules & Requirements

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-12 hours of independent study per week

#### Summer:

6 weeks - 1-12 hours of independent study per week

8 weeks - 1-12 hours of independent study per week

### Additional Details

**Subject/Course Level:** Public Health/Graduate

**Grading:** The grading option will be decided by the instructor when the class is offered.

## PB HLTH 375A School of Public Health Schoolwide Pedagogy Course 2 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Skill development and professional preparation for graduate student instructors in public health courses. Preparing for and leading discussion sections. Designing writing prompts. Preparing and creating problem sets. Working with students one-on-one. Grading students' writing and exams. Self assessment. Developing a course syllabus. Use of technology in public health classes. Required for first-time public health GSIs who are not participating in an SPH divisional pedagogy course.

### Objectives & Outcomes

**Course Objectives:** Assess student learning and grading student work fairly, consistently, and efficiently;

Build confidence in your abilities to teach.

Create and evaluate the effectiveness of discussion section plans that employ active learning strategies;

Critically reflect upon teaching and learning experiences and explain your choices as

a teacher;

Describe and utilize a variety of teaching strategies and evaluation methods, including:

Develop a "toolbox" of teaching articles, resources and activities for future use; and,

Develop learning objectives for classroom activities and assignments;

Develop skills and demonstrate strategies to facilitate a more inclusive learning

environment to meet the needs of diverse students

Develop skills in giving constructive feedback to peers on teaching;

Engage in collaborative learning to identify, discuss, evaluate and engage in

teaching strategies designed for online or in-person class sessions;

Identify your teaching strengths and areas for development;

Reflect on your own identity, positionality and power and the role it plays in the classroom by learning about racism, anti-racism, inclusion, implicit bias, stigma, etc.

Utilize feedback and assessment tools to improve teaching;

### Rules & Requirements

**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:** Public Health/Professional course for teachers or prospective teachers

**Grading:** Offered for satisfactory/unsatisfactory grade only.

**Instructors:** Lachance, Sheats

**Formerly known as:** Public Health 333