

Public Health

Bachelor of Arts (BA)

The School of Public Health offers an undergraduate major through the College of Letters & Science (<http://ls.berkeley.edu>). The goal of the major is to provide students with an interdisciplinary understanding of epidemiology, biostatistics, environmental health, health behavior, and health policy. These areas of emphasis range across the spectrum of natural science to social science. Students in the program will develop and apply knowledge from multiple disciplines for the promotion and protection of the health of the human population, giving due consideration to principles of human rights and cultural perspectives that abound in a multicultural country and world.

Declaring the Major

Although the major remains capped (impacted), the department encourages all qualified students to apply. To qualify, students must have completed the prerequisites in math, biology, and the social sciences. For further information regarding these prerequisites, please see the Major Requirements tab on this page.

Students should apply to the Public Health major after completion of the lower division requirements. Non-transfer students must apply to the major by the end of their fifth semester in attendance at UC Berkeley. Transfer students must apply by the end of their first semester in attendance at UC Berkeley.

After completing the prerequisites (<http://www.sph.berkeley.edu/undergraduate-major/preparing-apply>), students should submit an application, which includes the following:

1. A review of an applicant's academic preparation (Coursework and GPA)
2. Two essays (Statement of Purpose and Personal History Statement)
3. Resume or CV

For more information, please see the School of Public Health website (<http://sph.berkeley.edu/undergraduate-options/how-apply>).

While completing the prerequisites for Public Health, students should also take the necessary steps to prepare themselves to declare an alternate major. While the department will do its best to bring in all qualified students, there is no guarantee that any one particular student will be admitted into the major. Therefore, students interested in the Public Health major should prepare an alternate major in case they are not admitted into the major. Public health demands everyone's attention — there are myriad undergraduate majors at UC Berkeley that will help students prepare to work in this field. All students interested in the major, or the field of public health in general, are encouraged to consult with an academic adviser.

Summer Minor or Certificate Program

Public health seeks to improve human health through the development and application of knowledge that prevents disease, protects the public from harm, and promotes health throughout the state, the nation, and the world. Under the global public health summer minor or certificate, students will develop and apply knowledge from multiple disciplines for the promotion and protection of the health of the human population, giving due consideration to principles of human rights and many cultural perspectives in our multicultural country and world. The summer minor

or certificate can serve as a precursor to further study in public health, other health professions, or any fields in which the health of persons and populations is a relevant concern. The summer minor can augment and enhance many different undergraduate bachelor degree programs and prepare students for professional and academic careers. In addition, public health is of interest for its own sake, as a component of a rigorous liberal arts education. Please note: the Summer Minor is only available to Berkeley students, and the Summer Certificate is only available to non-Berkeley students.

In addition to the University, campus, and college requirements, listed on the College Requirements tab, students must fulfill requirements specific to their major program.

General Guidelines

1. All courses taken to fulfill the major requirements below must be taken for graded credit, other than courses listed which are offered on a *Pass/No Pass* basis only. Other exceptions to this requirement are noted as applicable.
2. No more than one upper division course may be used to simultaneously fulfill requirements for a student's major and minor programs, with the exception of minors offered outside of the College of Letters & Science.
3. A minimum grade point average (GPA) of 2.0 must be maintained in both upper and lower division courses used to fulfill the major requirements.

For information regarding residence requirements and unit requirements, please see the College Requirements tab.

Lower Division Prerequisites

All prerequisite courses must be completed before declaring the major with a minimum grade of C- or above.

The undergraduate Public Health program accepts Advanced Placement (AP) units for the Social Sciences and Math Prerequisites. AP scores of 3, 4, or 5 are acceptable for the following courses:

- Psychology for PSYCH 1 or PSYCH 2
- Economics (both micro and macro) for ECON 1, 2, or 3
- Government for POL SCI 2 or 4
- Math
 - A minimum score of a 3 on the Math AB or BC exam is equivalent to MATH 1A.
 - A score of 5 on the BC Math is equivalent to MATH 1A and 1B

If students have taken both an AP exam and the equivalent college-level course, we will only take the grade from the college-level course into consideration for admissions purposes. For AP Government, students may take either POL SCI 2 or 4 in combination with their AP score.

Biological Sciences

Select 7 units from the following:

BIOLOGY 1A	General Biology Lecture	3
BIOLOGY 1B	General Biology Lecture and Laboratory	4
MCELLBI 32	Introduction to Human Physiology	3
MCELLBI 50	The Immune System and Disease	4
MCELLBI 55	Plagues and Pandemics	3
MCELLBI/ PSYCH C61	Brain, Mind, and Behavior	3

NUSCTX 10 Introduction to Human Nutrition 3

Mathematics

Select two of the following, or their equivalents:

MATH 1A Calculus 4

MATH 1B Calculus 4

MATH 10A Methods of Mathematics: Calculus, Statistics, and Combinatorics 4

MATH 10B Methods of Mathematics: Calculus, Statistics, and Combinatorics 4

MATH 16A Analytic Geometry and Calculus 3

MATH 16B Analytic Geometry and Calculus 3

MATH 32 Precalculus (Only if completed Fall 2016 or earlier) 4

Social Science

Select three courses from at least two of the following areas:

Anthropology

ANTHRO 3 Introduction to Social and Cultural Anthropology 4

or ANTHRO 3AC Introduction to Social/Cultural Anthropology (American Cultures)

Economics

ECON 1 Introduction to Economics 4

or ECON 2 Introduction to Economics--Lecture Format

or ECON C3 Introduction to Environmental Economics and Policy

Political Science

POL SCI 2 Introduction to Comparative Politics 4

POL SCI 4 Introduction to Political Theory 4

Psychology

PSYCH 1 General Psychology 3

or PSYCH 2 Principles of Psychology

Sociology

SOCIOL 1 Introduction to Sociology 4

or SOCIOL 3AC Principles of Sociology: American Cultures

SOCIOL 5 Evaluation of Evidence 4

Upper Division Requirements

PB HLTH 142 Introduction to Probability and Statistics in Biology and Public Health ¹ 4

PB HLTH 150A Introduction to Epidemiology and Human Disease 4

PB HLTH 150B Introduction to Environmental Health Sciences 3

PB HLTH 150D Introduction to Health Policy and Management 3

PB HLTH 150E Introduction to Community Health and Human Development 3

Capstone Requirement

Choose one:

PB HLTH 130 Advanced Health Policy 3

PB HLTH 170C Drinking Water and Health 3

PB HLTH 196 Special Topics in Public Health ^{Senior Research Seminar OR Preparation for Public Health Practice Seminar} 3

PB HLTH H195A Special Study for Honors Candidates in Public Health
& pb hlth h195b Health and Course Not Available 6

PB HLTH 207A Public Health Aspects of Maternal and Child Nutrition 3

PB HLTH 252C Intervention Trial Design 3

PB HLTH 253B Epidemiology and Control of Infectious Diseases 3

PB HLTH 256 Human Genome, Environment and Public Health 4

¹ Alternatively, PB HLTH 141 Introduction to Biostatistics can be substituted for PB HLTH 142

Elective Requirements

10 Units of Electives

Courses may be selected from the list below. It is not required for students to choose a specific subject concentration. Any PB HLTH courses (excluding the DeCal, group study, and independent research courses) can also meet elective requirements. Graduate courses at the School of Public Health can also count towards elective units.

Biostatistics

DEMOG 110 Introduction to Population Analysis 3

MATH 53 Multivariable Calculus 4

MATH 54 Linear Algebra and Differential Equations 4

PB HLTH 145 Statistical Analysis of Continuous Outcome Data 4

STAT 133 Concepts in Computing with Data 3

STAT 134 Concepts of Probability 4

STAT 135 Concepts of Statistics 4

STAT 150 Stochastic Processes 3

STAT 151A Linear Modelling: Theory and Applications 4

STAT 153 Introduction to Time Series 4

Infectious Diseases

CHEM 135 Chemical Biology 3

ESPM C138/
MCELLBI C114/
PLANTBI C114 Introduction to Comparative Virology 4

INTEGBI 114 Infectious Disease Dynamics 4

INTEGBI 131 General Human Anatomy 3

INTEGBI 132 Survey of Human Physiology 4

INTEGBI 137 Human Endocrinology 4

INTEGBI 141 Human Genetics 3

MCELLBI C100A/
CHEM C130 Biophysical Chemistry: Physical Principles and the Molecules of Life 4

MCELLBI 102 Survey of the Principles of Biochemistry and Molecular Biology 4

MCELLBI C114 Introduction to Comparative Virology 4

MCELLBI 130 Cell and Systems Biology 4

MCELLBI 140 General Genetics 4

MCELLBI 150 Molecular Immunology 4

MCELLBI 160 Cellular and Molecular Neurobiology 4

PLANTBI C110L Biology of Fungi with Laboratory 4

PB HLTH C102/
MCELLBI C103/
PLANTBI C103 Course Not Available 3

PB HLTH 162A Public Health Microbiology 3

MCELLBI 140	General Genetics	4
PB HLTH 112	Global Health: A Multidisciplinary Examination	4
Environmental Health Sciences		
CIV ENG 111	Environmental Engineering	3
CIV ENG 113	Ecological Engineering for Water Quality Improvement	3
CIV ENG 114	Environmental Microbiology	3
ECON/ ENVECON C102	Natural Resource Economics	4
ECON C171/ ENVECON C151	Economic Development	4
ECON/ ENVECON C181	International Trade	4
ENE,RES C100/ PUB POL C184	Energy and Society	4
ENE,RES 102	Quantitative Aspects of Global Environmental Problems	4
ENVECON 131	Globalization and the Natural Environment	3
ENVECON 152	Advanced Topics in Development and International Trade	3
ENVECON 153	Population, Environment, and Development	3
ENVECON 161	Advanced Topics in Environmental and Resource Economics	4
ESPM 163AC	Environmental Justice: Race, Class, Equity, and the Environment	4
ESPM 168	Political Ecology	4
ESPM 169	International Environmental Politics	4
GEOG 123/ DEV STD 150	Postcolonial Geographies	4
GEOG 130	Food and the Environment	4
GEOG 138	Global Environmental Politics	4
GEOG 187	Geographic Information Analysis	4
GEOG/LD ARCH C188	Geographic Information Systems	4
HISTORY 120AC	American Environmental and Cultural History	4
INTEGBI 117	Medical Ethnobotany	2
IAS/ENVECON C175	The Economics of Climate Change	4
ISF 100D	Introduction to Technology, Society, and Culture	4
ISF 100G	Introduction to Science, Society, and Ethics	4
NUSCTX 110	Toxicology	4
NUSCTX 160	Metabolic Bases of Human Health and Diseases	4
PB HLTH C160/ ESPM C167	Environmental Health and Development	4
SOCIOI 121	Innovation and Entrepreneurship: Social and Cultural Context	4
SOCIOI 166	Society and Technology	4
ENVECON C151/ ECON C171	Economic Development	4
ENVECON/ ECON C181	International Trade	4
ESPM C167	Environmental Health and Development	4
Health Policy & Management		
CY PLAN 120	Community Planning and Public Policy for Disability	3

DEMOG/SOCIOI C126	Sex, Death, and Data	4
ECON 157	Health Economics	4
ESPM 102D	Climate and Energy Policy	4
LEGALST 103	Theories of Law and Society	4
LEGALST 107	Theories of Justice	4
LEGALST 168	Sex, Reproduction and the Law	4
MEDIAST 102	Course Not Available	4
PB HLTH 116	Seminar on Social, Political, and Ethical Issues in Health and Medicine	3
PB HLTH 126	Health Economics and Public Policy	3
PB HLTH 181	Poverty and Population	3
POL SCI 103	Congress	4
POL SCI 150	The American Legal System	4
POL SCI 171	California Politics	4
PUB POL 101	Introduction to Public Policy Analysis	4
PUB POL C103	Wealth and Poverty	4
PUB POL 117AC	Race, Ethnicity, and Public Policy	4
PUB POL 156	Program and Policy Design	4
PUB POL 179	Public Budgeting	4
SOCIOI 115G	Health in a Global Society	4
SOC WEL 112	Social Welfare Policy	3
Community Health & Human Development		
ASAMST 143AC	Asian American Health	3
CHICANO 176	Chicanos and Health Care	3
ESPM 163AC/ SOCIOI 137AC	Environmental Justice: Race, Class, Equity, and the Environment	4
ISF C100G	Introduction to Science, Technology, and Society	4
HISTORY C191/ HMEDSCI C133/ UGIS C133	Death, Dying, and Modern Medicine: Historical and Contemporary Perspectives	4
NUSCTX 166	Nutrition in the Community	3
PB HLTH 14	Healthy People: Introduction to Health Promotion	4
PB HLTH 15	Introduction to Global Health Equity	3
PB HLTH 104A & PB HLTH 104B	Health Promotion in a College Setting and Health Promotion in a College Setting	4
PB HLTH 107	Violence, Social Justice, and Public Health	2
PB HLTH 118	Nutrition in Developing Countries	3
PB HLTH 129	The Aging Human Brain	3
PB HLTH C155/ SOCIOI C115	Sociology of Health and Medicine	4
PSYCH 134	Health Psychology	3

Overview

The summer Global Public Health Minor/Certificate explores health-related issues affecting populations in the United States and worldwide. Students complete courses covering a range of disciplines and methods relevant to promotion and protection of human health, emerging health issues, healthcare systems, and approaches to address and intervene. It will expand knowledge and comprehension of domestic and international challenges for human health. Valuable internship experience, completed locally, nationally, or abroad, and the development of both technical and public health practice skills is part of the available curriculum. The

certificate can be pursued by non-UC Berkeley students in or outside of California, including international students.

Please note: this program option is only available during the summer.

The two options available are described below:

Summer Global Public Health Minor for UC Berkeley students: The Summer Minor in Global Public Health consists of three core and two elective courses taught in two consecutive, six-week summer sessions. Completion of core courses and any two electives listed below will satisfy the minor. A local or global public health 8-week internship with required seminar can also serve as one of the elective courses. Students declaring a minor must do so in writing to the Director of Undergraduate Program at the School of Public Health. *The minor can be completed in one or two summers. Students pursuing the 8-week internship as one elective will need two summers to complete the minor.*

Summer Global Public Health Certificate for non-UC Berkeley students: The Summer Certificate in Global Public Health consists of three core and two elective courses taught in two consecutive, six-week summer sessions. Once the required core courses are completed, any two electives listed below will satisfy the requirements of the certificate. *The certificate can be completed in one or two summers.*

UC Berkeley and visiting students who do not want to declare the minor or receive a certificate, but are interested in these classes may enroll in as many courses as they wish.

Core Courses for Summer Global Public Health Minor or Summer Global Public Health Certificate

Required Courses/Total Units		11
PB HLTH 112	Global Health: A Multidisciplinary Examination (Session A, p.m.) Good health at the individual and community level is central to human happiness, economic development, and societal progress. Good health, which is not simply the absence of illness and injury, is the result of the complex interplay of many factors, including the legal, social, political, and physical environments, economic forces, food availability and nutrition, access to safe water and sanitation, cultural beliefs and human behaviors, religion, and the availability of affordable preventive measures such as vaccines and of curative services, among others. By definition, global health transcends geopolitical borders and standard academic disciplines, so a broad multidisciplinary approach to its study and understanding is required. Students will be expected to read, understand, and use sometimes advanced materials from diverse disciplines. Case-based discussions will be included in the course. This is a three-unit course.)	4

PB HLTH 250A	Epidemiologic Methods I (Session D, p.m.) This three-unit introductory 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 public health professionals. Examples are drawn from national and international public health issues.)	3
--------------	---	---

PB HLTH 142	Introduction to Probability and Statistics in Biology and Public Health (Session D, a.m.) This course covers statistical methods used in applied research with an emphasis on principles of statistical reasoning, underlying assumptions, and careful interpretation of results. Topics covered include: descriptive statistics, graphical displays of data, introduction to probability, expectations and variance of random variables, confidence intervals and tests for means, differences of means, proportions, differences of proportions, chi-square tests for categorical variables, regression and multiple regression, an introduction to analysis of variance. Statistical software (STATA) will be used to supplement hand calculations.)	4
or PB HLTH 141	Introduction to Biostatistics	6

Elective Courses for Global Health Minor or Global Health Certificate/Total Units

Select two of the following:

PB HLTH 118	Nutrition in Developing Countries (Session D, a.m.) An intensive five-unit introductory course in statistical methods used in applied research with an emphasis on principles of statistical reasoning, underlying assumptions, and careful interpretation of results. Topics covered include: descriptive statistics, graphical displays of data, introduction to probability, expectations and variance of random variables, confidence intervals and tests for means, differences of means, proportions, differences of proportions, chi-square tests for categorical variables, regression and multiple regression, an introduction to analysis of variance. Statistical software (STATA) will be used to supplement hand calculations.)	3
-------------	--	---

PB HLTH 150B	Introduction to Environmental Health Sciences (Session A, p.m.) This three-unit course presents the relationship between chemical, physical, and biological hazards in the environment and their impact on human health. The course focuses on the core areas of environmental health sciences: toxicology, microbial ecology, exposure assessment, risk assessment, environmental epidemiology, regulations/policies, and GIS/spatial analysis. It examines the science, health considerations and regulations of contaminants in air, water and food in the context of both developed and developing countries. Other key topics such as ethics, environmental justice, and occupational health and safety are also discussed. Local, national and international case studies are used to provide real-world examples of important environmental health concepts.)	3	PB HLTH 196	Special Topics in Public Health (Session D) This two to three unit course aims to expand students' understanding of the interconnected factors that influence women's global health and empowerment. Using an interdisciplinary approach, it will draw from many fields such as global health and development, medical and reproductive sciences, epidemiology, demography, law, sociology, economy, political science, advocacy and community health sciences. The curriculum follows a life course framework and includes the following topics: foundations of sexual and reproductive health for girls, adolescents, and women throughout the life cycle; basic principles of gender and empowerment theory; historic paradigm shifts in political frameworks, health policies and global reproductive rights; demographic and societal changes and their impact on health, education, economic development and environmental resources; as well as the role of men and boys as allies for gender equity and women's empowerment in different cultural, regional and global contexts. The course will be taught in a highly interactive format with discussions, group projects and case studies, and will draw from the experiences of the students.) Women's Global Health and Empowerment	3
PB HLTH 150D	Introduction to Health Policy and Management (Session A, a.m.) This three-unit course in health policy and management course will introduce students to health policy making and the organization of the United States healthcare system. 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. Students will also learn about current issues in U.S. health policy and contemporary organizational challenges experienced by the U.S. healthcare system.)	3			
PB HLTH 162A	Public Health Microbiology (Session D, a.m.) This three-unit course presents the fundamentals of microbiology as it relates to the causes of disease and the promotion of health. The primary emphasis will be on infectious agents and the diseases that they produce in humans. To fully comprehend how these agents produce disease, we will learn their properties, how they are transmitted, and what their effects are on humans. The course covers the host immune response to microbial infections as well as the prevention and treatment of infections. In addition, students will be introduced to microorganisms that usually do not cause disease but play indispensable and beneficial roles. Students will learn about the threat of infectious diseases nationally and globally.)	3			

Undergraduate students must fulfill the following requirements in addition to those required by their major program.

For detailed lists of courses that fulfill college requirements, please review the College of Letters & Sciences (<http://guide.berkeley.edu/archive/2018-19/undergraduate/colleges-schools/letters-science>) page in this Guide. For College advising appointments, please visit the L&S Advising (<https://ls.berkeley.edu/advising/about-undergraduate-advising-services>) Pages.

University of California Requirements

Entry Level Writing (<http://writing.berkeley.edu/node/78>)

All students who will enter the University of California as freshmen must demonstrate their command of the English language by fulfilling the Entry Level Writing requirement. Fulfillment of this requirement is also a prerequisite to enrollment in all reading and composition courses at UC Berkeley.

American History and American Institutions (<http://guide.berkeley.edu/archive/2018-19/undergraduate/colleges-schools/letters-science/american-history-institutions-requirement>)

The American History and Institutions requirements are based on the principle that a US resident graduated from an American university, should have an understanding of the history and governmental institutions of the United States.

Berkeley Campus Requirement

American Cultures (<http://americancultures.berkeley.edu/students/courses>)

All undergraduate students at Cal need to take and pass this course in order to graduate. The requirement offers an exciting intellectual environment centered on the study of race, ethnicity and culture of the United States. AC courses offer students opportunities to be part of

research-led, highly accomplished teaching environments, grappling with the complexity of American Culture.

College of Letters & Science Essential Skills Requirements

Quantitative Reasoning (<http://guide.berkeley.edu/archive/2018-19/undergraduate/colleges-schools/letters-science/quantitative-reasoning-requirement>)

The Quantitative Reasoning requirement is designed to ensure that students graduate with basic understanding and competency in math, statistics, or computer science. The requirement may be satisfied by exam or by taking an approved course.

Foreign Language (<http://guide.berkeley.edu/archive/2018-19/undergraduate/colleges-schools/letters-science/foreign-language-requirement>)

The Foreign Language requirement may be satisfied by demonstrating proficiency in reading comprehension, writing, and conversation in a foreign language equivalent to the second semester college level, either by passing an exam or by completing approved course work.

Reading and Composition (<http://guide.berkeley.edu/archive/2018-19/undergraduate/colleges-schools/letters-science/reading-composition-requirement>)

In order to provide a solid foundation in reading, writing, and critical thinking the College requires two semesters of lower division work in composition in sequence. Students must complete parts A & B reading and composition courses by the end of their second semester and a second-level course by the end of their fourth semester.

College of Letters & Science 7 Course Breadth Requirements

Breadth Requirements (<http://guide.berkeley.edu/archive/2018-19/undergraduate/colleges-schools/letters-science/#breadthrequirements>)

The undergraduate breadth requirements provide Berkeley students with a rich and varied educational experience outside of their major program. As the foundation of a liberal arts education, breadth courses give students a view into the intellectual life of the University while introducing them to a multitude of perspectives and approaches to research and scholarship. Engaging students in new disciplines and with peers from other majors, the breadth experience strengthens interdisciplinary connections and context that prepares Berkeley graduates to understand and solve the complex issues of their day.

Unit Requirements

- 120 total units
- Of the 120 units, 36 must be upper division units
- Of the 36 upper division units, 6 must be taken in courses offered outside your major department

Residence Requirements

For units to be considered in "residence," you must be registered in courses on the Berkeley campus as a student in the College of Letters & Science. Most students automatically fulfill the residence requirement by attending classes here for four years. In general, there is no need to be concerned about this requirement, unless you go abroad for a semester or year or want to take courses at another institution or through

UC Extension during your senior year. In these cases, you should make an appointment to meet an adviser to determine how you can meet the Senior Residence Requirement.

Note: Courses taken through UC Extension do not count toward residence.

Senior Residence Requirement

After you become a senior (with 90 semester units earned toward your BA degree), you must complete at least 24 of the remaining 30 units in residence in at least two semesters. To count as residence, a semester must consist of at least 6 passed units. Intercampus Visitor, EAP, and UC Berkeley-Washington Program (UCDC) units are excluded.

You may use a Berkeley Summer Session to satisfy one semester of the Senior Residence requirement, provided that you successfully complete 6 units of course work in the Summer Session and that you have been enrolled previously in the college.

Modified Senior Residence Requirement

Participants in the UC Education Abroad Program (EAP), Berkeley Summer Abroad, or the UC Berkeley Washington Program (UCDC) may meet a Modified Senior Residence requirement by completing 24 (excluding EAP) of their final 60 semester units in residence. At least 12 of these 24 units must be completed after you have completed 90 units.

Upper Division Residence Requirement

You must complete in residence a minimum of 18 units of upper division courses (excluding UCEAP units), 12 of which must satisfy the requirements for your major.

Learning Goals for the Major

1. Critical Thinking Skills
 - Describe the public health framework of the determinants of the health of populations.
 - Recognize the public health perspective of disease prevention and health promotion.
 - Explain how public health studies the interplay between biology, environment, and behavior.
 - Understand the basic concepts from the social and behavioral sciences in public health.
2. Quantitative Skills
 - Recognize commonly used measures of population health.
 - Identify commonly used methods of measuring risk.
 - Describe common study designs for assessing risk from exposures.
 - Assemble and display summary measures using graphs and tables.
 - Recognize the basics of statistical hypothesis testing.
 - Know how to calculate and interpret confidence intervals.
3. Communication Skills
 - Incorporate statistical and scientific findings into written materials.
 - Prepare fact sheets and other health education tools.
 - Know how to interpret public health reports and scientific literature.
 - Create and give presentations on public health issues.
4. Problem-Solving Skills
 - Research and summarize relevant public health literature.

- Apply the systems thinking approach to issues in public health.
 - Identify problems in public health with upstream-downstream model.
5. Specialized Knowledge
- Integrate human biology and genetics with public health issues.
 - Comprehend the basics of infectious disease.
 - Understand the basics of chronic disease.
 - Examine and assess environmental health issues.
 - Describe the organization and financing of the United States health care system.
6. Lifelong Learning Skills
- Identify ethical issues of public health.
 - Be able to perform data collection and research.
 - Acknowledge the role of disparities in public health.

Public Health

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

PB HLTH 14 Healthy People: Introduction to Health Promotion 4 Units

Terms offered: Spring 2016, Spring 2015, Spring 2014

Introduction to personal and community health, drawing on physical and social sciences. Specific areas include stress, alcohol and drugs, nutrition, exercise, the environment, communication, and sexuality. Readings, lectures, and discussions explore key issues for students and examine those issues in the context of contemporary American society. Public health approaches to disease prevention and health promotion are explored for each topic.

Healthy People: Introduction to Health Promotion: Read More [+]

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. Final exam required.

Instructor: Kodama

Healthy People: Introduction to Health Promotion: Read Less [-]

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.

Introduction to Global Health Equity: Read More [+]

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

Introduction to Global Health Equity: Read Less [-]

PB HLTH 84 Sophomore Seminar 1 or 2 Units

Terms offered: Spring 2020, Spring 2019, Spring 2016

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.

Sophomore Seminar: Read More [+]

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.

Sophomore Seminar: Read Less [-]

PB HLTH 98 Directed Group Study 1 - 4 Units

Terms offered: Spring 2016, Fall 2015, Spring 2015

Directed Group Study: [Read More](#) [+]

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.

Directed Group Study: [Read Less](#) [-]

PB HLTH 99 Supervised Independent Study 1 - 4 Units

Terms offered: Spring 2016, Fall 2015, Spring 2015

Supervised Independent Study: [Read More](#) [+]

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.

Supervised Independent Study: [Read Less](#) [-]

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

Terms offered: Spring 2020, Fall 2019, Spring 2019

Human activity and human numbers threaten the possibility of irreversible damage to the fragile biosphere on which all life depends. The current generation of students is the first one to face this existential problem and it may be the last one that can solve it. The goal of this course is for faculty with expertise in the many variables involved-energy consumption, food security, population growth and family planning, climate change, governance, migration, resource consumption, etc.-to give one-hour presentations on their specific topic. Teacher Scholars supervised by a GSI will facilitate student discussion groups, who will then prepare brief statements responding to the challenge presented, and suggest ways of ameliorating the problems

A Sustainable World: Challenges and Opportunities: [Read More](#) [+]

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.).

Instructor: Potts

A Sustainable World: Challenges and Opportunities: [Read Less](#) [-]

PB HLTH 104A Health Promotion in a College Setting 2 Units

Terms offered: Fall 2016, Fall 2015, Fall 2014

Topics include health promotion, medical self-care, and delivery of health care service. Through a combined theory and practice approach, topics are covered as they apply to the campus community. The course is divided into three sections corresponding to particular campus health field experiences in which students may be involved.

Health Promotion in a College Setting: [Read More](#) [+]

Rules & Requirements

Prerequisites: Consent of instructor

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

Hours & Format

Fall and/or spring: 15 weeks - 1.5 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 not required.

Instructor: Kodama

Health Promotion in a College Setting: [Read Less](#) [-]

PB HLTH 104B Health Promotion in a College Setting 2 Units

Terms offered: Spring 2017, Spring 2016, Spring 2015

Topics include health promotion, medical self-care, and delivery of health care service. Through a combined theory and practice approach, topics are covered as they apply to the campus community. The course is divided into three sections corresponding to particular campus health field experiences in which students may be involved.

Health Promotion in a College Setting: Read More [+]

Rules & Requirements

Prerequisites: Consent of instructor

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

Hours & Format

Fall and/or spring: 15 weeks - 1.5 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 not required.

Instructor: Kodama

Health Promotion in a College Setting: Read Less [-]

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

Terms offered: Summer 2020 First 6 Week Session, Summer 2019 First 6 Week Session, Summer 2018 First 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.

Violence, Social Justice, and Public Health: Read More [+]

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

Violence, Social Justice, and Public Health: Read Less [-]

PB HLTH W108 Women's Health, Gender And Empowerment 3 Units

Terms offered: Spring 2020, Spring 2019

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.

Women's Health, Gender And Empowerment: Read More [+]

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 hour of web-based discussion and 1.5 hours of web-based lecture per week

PB HLTH 112 Global Health: A Multidisciplinary Examination 4 Units

Terms offered: Summer 2017 First 6 Week Session, Spring 2016, Spring 2015

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.

Global Health: A Multidisciplinary Examination: Read More [\[+\]](#)

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 - 9 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.

Instructors: Krishnan, Reingold

Global Health: A Multidisciplinary Examination: Read Less [\[-\]](#)

PB HLTH N112 Global Health: A Multidisciplinary Examination 4 Units

Terms offered: Summer 2020 First 6 Week Session, Summer 2019 First 6 Week Session, Summer 2018 First 6 Week Session

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.

This class is the Summer Session version of PH 112; same units and content, increased lecture and discussion hours.

Global Health: A Multidisciplinary Examination: Read More [\[+\]](#)

Rules & Requirements

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

Hours & Format

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: Reingold, Colford

Global Health: A Multidisciplinary Examination: Read Less [\[-\]](#)

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

Terms offered: Spring 2020, Fall 2019, Spring 2019

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.

Seminar on Social, Political, and Ethical Issues in Health and Medicine: Read More [\[+\]](#)

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.

Instructor: Potts

Seminar on Social, Political, and Ethical Issues in Health and Medicine: Read Less [\[-\]](#)

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

Introduction to Global Health Disparities Research: Read More [\[+\]](#)

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

Introduction to Global Health Disparities Research: Read Less [\[-\]](#)

PB HLTH 118 Nutrition in Developing Countries 3 Units

Terms offered: Summer 2020 First 6 Week Session, Fall 2019, Summer 2019 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.

Nutrition in Developing Countries: Read More [\[+\]](#)

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: Fernald

Nutrition in Developing Countries: Read Less [\[-\]](#)

PB HLTH 126 Health Economics and Public Policy 3 Units

Terms offered: Spring 2020, Spring 2019, Fall 2018

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.

Health Economics and Public Policy: [Read More](#) [+]

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

Health Economics and Public Policy: [Read Less](#) [-]

PB HLTH 129 The Aging Human Brain 3 Units

Terms offered: Fall 2019, Fall 2017

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.

The Aging Human Brain: [Read More](#) [+]

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 not required.

Instructor: Jagust

The Aging Human Brain: [Read Less](#) [-]

PB HLTH 130 Advanced Health Policy 3 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

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.

Advanced Health Policy: [Read More](#) [+]

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

Advanced Health Policy: [Read Less](#) [-]

PB HLTH 141 Introduction to Biostatistics 5 Units

Terms offered: Summer 2017 Second 6 Week Session, Summer 2016 10 Week Session, Summer 2016 Second 6 Week Session

An intensive introductory course in statistical methods used in applied research. Emphasis on principles of statistical reasoning, underlying assumptions, and careful interpretation of results. Topics covered: descriptive statistics, graphical displays of data, introduction to probability, expectations and variance of random variables, confidence intervals and tests for means, differences of means, proportions, differences of proportions, chi-square tests for categorical variables, regression and multiple regression, an introduction to analysis of variance. Statistical software will be used to supplement hand calculation. Students who successfully complete Public Health 141 are prepared to continue their biostatistics course work in 200-level courses. With the approval of their degree program, MPH students may use Public Health 141 to fulfill the biostatistics course requirement (contact program manager for approval). Public Health 141 also fulfills the biostatistics course requirement for the Public Health Undergraduate Major. Introduction to Biostatistics: [Read More](#) [+]

Rules & Requirements

Prerequisites: High school algebra

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture, 1 hour of discussion, and 2 hours of laboratory per week

Summer: 6 weeks - 12.5 hours of lecture and 7.5 hours of laboratory per week

Additional Details

Subject/Course Level: Public Health/Undergraduate

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

Introduction to Biostatistics: [Read Less](#) [-]

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

Terms offered: Summer 2020 Second 6 Week Session, Spring 2020, Fall 2019

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

Introduction to Probability and Statistics in Biology and Public Health: [Read More](#) [+]

Rules & Requirements

Prerequisites: High school algebra

Hours & Format

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

Summer: 6 weeks - 7.5 hours of lecture, 2.5 hours of discussion, and 2.5 hours of laboratory per week

Additional Details

Subject/Course Level: Public Health/Undergraduate

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

Instructor: Selvin

Introduction to Probability and Statistics in Biology and Public Health: [Read Less](#) [-]

PB HLTH W142 Introduction to Probability and Statistics in Biology and Public Health 4 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

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

Introduction to Probability and Statistics in Biology and Public Health: [Read More](#) [+]

Hours & Format

Fall and/or spring: 7 weeks - 8 hours of web-based 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 not required.

Instructor: Lahiff

Introduction to Probability and Statistics in Biology and Public Health: [Read Less](#) [-]

PB HLTH 144A Introduction to SAS Programming 2 Units

Terms offered: Spring 2016, Spring 2015, Spring 2014

This course is intended to serve as an introduction to the SAS programming language for Windows in an applied, workshop environment. Emphasis is on data management and programming in a public health research setting. Topics include SAS language to compute, recode, label, and format variables as well as sort, subset, concatenate, and merge data sets. SAS statistical procedures will be used to compute univariate and bivariate summary statistics and tests, simple linear models, graphical plots, and statistical output data sets.

Introduction to SAS Programming: [Read More](#) [+]

Rules & Requirements

Prerequisites: 142 or consent of instructor

Credit Restrictions: This course (or equivalent) is required for students who plan to enroll in 251, Practicum in Epidemiological Methods. Enrollment is limited to School of Public Health students. If space permits, others may enroll with consent of instructor.

Hours & Format

Fall and/or spring: 8 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Public Health/Undergraduate

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

Instructor: Lein

Introduction to SAS Programming: [Read Less](#) [-]

PB HLTH 144B Intermediate SAS Programming 2 Units

Terms offered: Spring 2016, Spring 2015, Spring 2014

Topics include data step flow control, looping and automated processing, implicit and explicit arrays, data simulation strategies, data set reconfiguration, use of SAS Macro variables, and writing simple SAS Macro programs.

Intermediate SAS Programming: [Read More](#) [+]

Rules & Requirements

Prerequisites: 144A

Credit Restrictions: Enrollment is limited to School of Public Health students. If space permits, others may enroll with consent of instructor.

Hours & Format

Fall and/or spring: 8 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Public Health/Undergraduate

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

Instructor: Lein

Intermediate SAS Programming: [Read Less](#) [-]

PB HLTH 145 Statistical Analysis of Continuous Outcome Data 4 Units

Terms offered: Fall 2016, Fall 2015, Spring 2013

Regression models for continuous outcome data: least squares estimates and their properties, interpreting coefficients, prediction, comparing models, checking model assumptions, transformations, outliers, and influential points. Categorical explanatory variables: interaction and analysis of covariance, correlation and partial correlation. Appropriate graphical methods and statistical computing. Analysis of variance for one- and two-factor models: F tests, assumption checking, multiple comparisons. Random effects models and variance components. Introduction to repeated measures models.

Statistical Analysis of Continuous Outcome Data: [Read More](#) [+]

Rules & Requirements

Prerequisites: 142 or equivalent

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/Undergraduate

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

Instructor: Lahiff

Formerly known as: 142B

Statistical Analysis of Continuous Outcome Data: [Read Less](#) [-]

PB HLTH 147 Global Perspective on Vision 2 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

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.

Global Perspective on Vision: [Read More](#) [+]

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

Global Perspective on Vision: [Read Less](#) [-]

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

Terms offered: Spring 2020, Spring 2019, Spring 2018

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.

Introduction to Epidemiology and Human Disease: Read More [\[+\]](#)

Rules & Requirements

Prerequisites: A course in statistics, preferably 142

Hours & Format

Fall and/or spring: 15 weeks - 4 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: Abrams, Barcellos, Buffler

Formerly known as: 150

Introduction to Epidemiology and Human Disease: Read Less [\[-\]](#)

PB HLTH 150B Introduction to Environmental Health Sciences 3 Units

Terms offered: Summer 2020 First 6 Week Session, Fall 2019, Summer 2019 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 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.

Introduction to Environmental Health Sciences: Read More [\[+\]](#)

Rules & Requirements

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

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. Final exam required.

Instructor: K. Smith

Formerly known as: second half of 150

Introduction to Environmental Health Sciences: Read Less [\[-\]](#)

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

Terms offered: Summer 2020 First 6 Week Session, Fall 2019, Summer 2019 First 6 Week Session

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.

Introduction to Health Policy and Management: Read More [\[+\]](#)

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

Subject/Course Level: Public Health/Undergraduate

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

Instructor: Flagg

Introduction to Health Policy and Management: Read Less [\[-\]](#)

PB HLTH 150E Introduction to Community Health and Human Development 3 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

This course will consist of a survey of the major social, cultural, and bio-behavioral patterns of health and well-being among individuals, families, neighborhoods, and communities. The course also will address the design, implementation, and evaluation of leading social and behavioral interventions and social policies designed to improve community and population health. This course will satisfy one of the core requirements for the undergraduate major in public health.

Introduction to Community Health and Human Development: Read More [\[+\]](#)

Rules & Requirements

Prerequisites: Third or fourth undergraduate standing or consent of instructor

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. Final exam required.

Instructor: Satariano

Introduction to Community Health and Human Development: Read Less [\[-\]](#)

PB HLTH C155 Sociology of Health and Medicine 4 Units

Terms offered: Summer 2020 First 6 Week Session, Spring 2019, Summer 2018 First 6 Week Session, Summer 2018 Second 6 Week Session, Spring 2018, Summer 2017 First 6 Week Session

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.

Sociology of Health and Medicine: Read More [+]

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

Sociology of Health and Medicine: Read Less [-]

PB HLTH C160 Environmental Health and Development 4 Units

Terms offered: Summer 2020 Second 6 Week Session, Spring 2020, Summer 2019 Second 6 Week Session

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.

Environmental Health and Development: Read More [+]

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

Environmental Health and Development: Read Less [-]

PB HLTH 162A Public Health Microbiology 4 Units

Terms offered: Summer 2020 Second 6 Week Session, Fall 2019, Summer 2019 Second 6 Week Session

Introduction to properties of microorganisms; their relationships with humans in causing infectious diseases and in maintaining health. With 162L, satisfies most requirements for a laboratory course in microbiology. May be taken without 162L.

Public Health Microbiology: Read More [+]

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: 8 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.

Instructors: Elbiek, Harris, Liu, Stanley

Public Health Microbiology: Read Less [-]

PB HLTH 162L Public Health Microbiology Laboratory 2 Units

Terms offered: Fall 2019, Fall 2018, Fall 2017

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.

Public Health Microbiology Laboratory: Read More [+]

Rules & Requirements

Prerequisites: College level courses in elementary biology and chemistry. PH162a (can be taken concurrently)

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

Public Health Microbiology Laboratory: Read Less [-]

PB HLTH 170C Drinking Water and Health 3 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

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.

Drinking Water and Health: Read More [+]

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

Drinking Water and Health: Read Less [-]

PB HLTH 181 Poverty and Population 3 Units

Terms offered: Fall 2019, Fall 2018, Fall 2017

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.

Poverty and Population: Read More [+]

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

Poverty and Population: Read Less [-]

PB HLTH 188 Fung Fellowship Seminar 3 Units

Terms offered: Spring 2020

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.

Fung Fellowship Seminar: Read More [\[+\]](#)

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

Fung Fellowship Seminar: Read Less [\[-\]](#)

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

Terms offered: Spring 2019, Fall 2017, Fall 2016

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). Special Study for Honors Candidates in Public Health: Read More [\[+\]](#)

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.).

Special Study for Honors Candidates in Public Health: Read Less [\[-\]](#)

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

Terms offered: Summer 2020 Second 6 Week Session, Fall 2019, Summer 2019 Second 6 Week Session

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.

Special Topics in Public Health: Read More [\[+\]](#)

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.

Special Topics in Public Health: Read Less [\[-\]](#)

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

Terms offered: Spring 2018, Summer 2017 8 Week Session, Spring 2017 Supervised experience relevant to specific aspects of public health in off-campus organizations. Regular individual meetings with faculty sponsor and written reports required.

Field Study in Public Health: Read More [\[+\]](#)

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.

Field Study in Public Health: Read Less [\[-\]](#)

PB HLTH 198 Directed Group Study 1 - 4 Units

Terms offered: Spring 2020, Fall 2019, Spring 2019

Directed Group Study: [Read More](#) [+]

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.

Directed Group Study: [Read Less](#) [-]

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

Terms offered: Spring 2017, Spring 2016, Fall 2015

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

Supervised Independent Study and Research: [Read More](#) [+]

Rules & Requirements

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

Hours & Format

Fall and/or spring: 15 weeks - 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.

Supervised Independent Study and Research: [Read Less](#) [-]