PUBLIC HEALTH
Chair: Professor Tara Watson


On leave Fall/Spring: Professor B. Klingenberg.
On leave Fall only: Professor L. Banta. Assistant Professor S. Godlonton.
On leave Spring only: Professors: A. Gehring, L. Shore-Sheppard.

Public health seeks to understand, and also to protect and improve, health at the level of a community or population. Communities make decisions and allocate resources that, intentionally or not, fundamentally shape human life. For example, great reductions in sickness and early death have come from social interventions with relatively low financial cost, such as physically separating drinking water from sewage, or distributing aspirin, condoms, mosquito nets, vaccines or soap, or sharing new ideas about life’s possibilities. The way a society is organized affects the way that social and scientific knowledge is distributed within it; access to that knowledge shapes health at the individual level. At its heart, the study of public health focuses on questions about relationships between science and society, and between reality and possibility: what effective public health policy is and how we can measure its effectiveness; what the relationship is, and ought to be, between research and policy; how we reconcile important moral and economic claims, or balance other values that compete with maximizing health; what counts as disease, over time and among cultures; how we think about cause and responsibility; what constitutes a healthy environment; how our fundamental beliefs determine our approaches to health decisions; and how such decisions ought to be made.

Requirements
Application to the concentration must be completed in the Spring of sophomore year. Applications are due during pre-registration. Application materials can be obtained on the public health website public-health.williams.edu by early April or by e-mailing the chair of the program. Due to excess demand for the concentration, applicants are not guaranteed admittance to the program. Depending on availability, a few students may be admitted in the Spring of Junior year with a mid-April deadline.

All students wishing to pursue the Area of Concentration should take this course early in their careers, preferably sophomore year. Students may petition the advisory committee to substitute a course taken in a study-abroad program focused on global health, providing that the course is equivalent in scope. However, students who plan to take advantage of this option should have taken at least two other courses from among the electives by the end of their sophomore year, and should recognize that those who lack a foundation in the core issues of the field may find it more challenging to prepare their proposal for admission to the concentration.

Statistics
Statistical analysis is at the heart of the quantitative tools necessary to study the health of populations. One course in statistics from the list below is required of all concentrators.

Elective Courses
Concentrators must take at least three electives, with at least two different prefixes, from the list below. Elective courses are grouped by category, but these clusters are not meant to constrain students to a single “track” within the program. Instead, each student is free to determine, with the guidance of an advisory committee member(s), a set of electives that provides an intellectually coherent exploration of their particular areas of interest within the field of public health. In choosing electives, students should consider the balance of breadth versus depth that will allow them to gain theoretical and methodological sophistication in one or more areas. Students may not substitute an independent study for any of these electives. Winter Study courses may not be counted towards the electives.

Experiential Component
Because many public health challenges cannot be fully appreciated until one has hands-on experience with real communities and actual populations, each concentrator must have at least one relevant field-based educational experience with a research component. This requirement may be met through participation in an approved study abroad program (see below), one of the Winter study courses marked with an asterisk, a WS99 project, or a not-for-credit summer or academic-year internship. In every case, the advisory committee must approve the project in advance. Please note that experiential component should address both the “public” and “health” in public health. Projects that center on clinical or lab or that do not have a meaningful health component will generally not satisfy the PH experiential requirement.

PHLH 402 (S) Senior Seminar in Public Health
The capstone seminar provides concentrators with the opportunity to reflect upon and synthesize their experiential learning in the context of understanding gained from a cohesive set of elective courses, and through the lens of a variety of intellectual and disciplinary frameworks. A second goal is to give concentrators experience working in a multi-disciplinary team to address a real-world, and in many cases very daunting, public health problem. Students will read, discuss, and compose written reflections on primary source empirical papers addressing a range of issues and disciplines in the field of public health. For example, topics may include the social determinants of health, environmental health risks, and access to health care. Students will also be divided into three or four research teams to investigate a contemporary real-life issue in public health by designing a study; collecting and analyzing data; and disseminating findings by written report and formal oral presentation to the public health advisory committee faculty. The capstone course is required of all concentrators, but may be opened to other students with relevant experience at the discretion of the instructor and the advisory committee, if space permits.

**Written Proposal**

To be considered for admission to the Area of Concentration in Public Health, students must submit a written statement describing the portfolio of courses, study abroad, and experiential learning component(s) they intend to pursue. In this proposal, candidates for the concentration should describe their intellectual goals, and if relevant, how these relate to their professional goals. A fundamental purpose of the proposal requirement is to encourage the student to consider concretely how s/he will engage with socio-cultural, behavioral, policy, and/or biomedical aspects of population health. To this end, students should address whether a methodological or disciplinary emphasis ties their chosen courses together, and how the intended experiential component will relate to this set of questions. This proposal is due by the end of course registration period in the spring of the sophomore year, and should be prepared in consultation with a member of the advisory committee. Concentrators are required to revisit and update their proposal prior to registration in the spring of the junior year, and to provide documentation of their internship experience both prospectively and retrospectively. Please note electives will not be offered every year. Students should check the course catalog as they considering possible electives.

**PHLH Bioethics + Interpretations of Health**

- CHIN 253/COMP 254/WGSS 255 “Disease” in Modern Chinese Literature and Culture
- COMP 232 Reading and Writing the Body
- HIST 374 American Medical History
- PHIL 212/WGSS 212 Ethics and Reproductive Technologies
- PHIL 213 Biomedical Ethics
- PHIL 227 Death and Dying
- PHIL 228/WGSS 228 Feminist Bioethics
- PHIL 274 Messing with People: The Ethics of Human Experimentation
- PHIL 337 Justice in Health Care
- REL 246/ANTH 246/WGSS 246/ASST 246 India’s Identities: Religion, Caste, and Gender
- REL 248/ASST 248/ANTH 248/WGSS 249/GBST 248 Body Politics in South Asia: Gender, Sex, Religion, and Nation
- SOC 332 Life and Death in Modernity
- SOC 371/HSCI 371/SCST 371 Science, Technology, and (Bio)medicalization

**PHLH Biomedical Determinants of Health**

- BIOL 133 Biology of Exercise and Nutrition
- BIOL 134/ENVI 134 The Tropics: Biology and Social Issues
- BIOL 136 Studying Human Genetic Diversity: Individuals, Populations, and ‘Races’–Dangerous Biology
- BIOL 219 Dangerous Exposures: Environment, Immunity, and Infectious Disease
- BIOL 313 Immunology
- BIOL 315 Microbiology: Diversity, Cellular Physiology, and Interactions
- BIOL 417 Translational Immunology: From Bench to Bedside
- CHEM 115 AIDS: The Disease and Search for a Cure
- CHEM 341/ENVI 341 Toxicology and Cancer
CHEM 343 Medicinal Chemistry
PSYC 317/NSCI 317 Nature via Nurture: Topics in Developmental Psychobiology
PSYC 335 Early Experience and the Developing Infant

**PHLH Core Courses**

PHLH 201 Dimensions of Public Health
PHLH 402 Senior Seminar in Public Health

**PHLH Decision-Making by Institutions + Individuals**

ECON 205 Public Economics
ECON 230 The Economics of Health and Health Care
ECON 381 Global Health Policy Challenges
ECON 465 Pollution and the Labor Market
ECON 468 Your Money or Your Life: Health Disparities in the United States
ECON 504 Public Economics
PSCI 209/WGSS 209 Poverty in America
PSCI 228 International Organization
PSCI 249/GBST 249 From Beetroot to Zero Grazing: Comparative Response to AIDS in Africa
PSYC 326 Choice and Decision Making

**PHLH Methods in Public Health**

ANTH 371 Medicine, Pathology, and Power: An Ethnographic View
ECON 379/523 Program Evaluation in International Development
MATH 310 Mathematical Biology
MATH 410/BIOL 214 Modeling in Ecology
PHLH 250 Qualitative Research Methods in Public Health
PHLH 255 Research Methods in Public Health

**PHLH Nutrition, Food Security, and Environmental Health**

AFR 211/AMST 211/ENVI 211/SOC 211 Race and the Environment
BIOL 220/ENVI 220 Field Botany and Plant Natural History
BIOL 308 Integrative Plant Biology: Fundamentals and New Frontiers
BIOL 422/ENVI 422 Ecology of Sustainable Agriculture
ENVI 233 The Industrial Animal
ENVI 283/PSCI 283 Dirty Politics: Regulating Hazardous Chemicals and Wastes
ENVI 308 Science and Politics in Environmental Decision Making
PHLH 220 Nutrition in the Developing World

**PHLH Reproductive, Maternal and Child Health**

ANTH 272/WGSS 272 Sex and the Reproduction of Society
HIST 378/WGSS 378 The History of Sexuality in America
PSYC 317/NSCI 317 Nature via Nurture: Topics in Developmental Psychobiology
PSYC 335 Early Experience and the Developing Infant
PSYC 337 Temperament and Biobehavioral Development
PSYC 350 Child Psychopathology
PSYC 352 Clinical and Community Psychology
REL 248/ASST 248/ANTH 248/WGSS 249/GBST 248 Body Politics in South Asia: Gender, Sex, Religion, and Nation

PHLH Social Determinants of Health
AFR 211/ENVI 211/SOC 211/AMST 211 Race and the Environment
ANTH 269/REL 269/ASST 269 Mindsight: Mindfulness & Medicine
ANTH 371 Medicine, Pathology, and Power: An Ethnographic View
ECON 380/ECON 519 Population Economics
ECON 468 Your Money or Your Life: Health Disparities in the United States
PSCI 209/WGSS 209 Poverty in America
WGSS 230/AFR 230 Gender, Sexuality, and Global HIV/AIDS

PHLH Statistics Courses
ECON 255 Econometrics
POEC 253 Empirical Methods in Political Economy
PSYC 201 Experimentation and Statistics
STAT 101 Elementary Statistics and Data Analysis
STAT 201 Statistics and Data Analysis
STAT 202 Introduction to Statistical Modeling
STAT 231 Statistical Design of Experiments
STAT 372 Longitudinal Data Analysis: Modeling
STAT 440 Categorical Data Analysis

STUDY ABROAD AND INTERNSHIPS
Although not a requirement for the PH concentration, study abroad and/or overseas internships provide a crucial opportunity to engage with global health issues through field-based coursework and independent research projects. The Public Health program in coordination with the Study Abroad Advisor and the Office of Career Counseling will advise students on opportunities in these areas. In particular, students may want to consider one of the several Global Health options offered through SIT. One or more courses completed on an approved study abroad program can be counted toward the three elective courses, with permission of the Chair. You can find general study away guidelines for Public Health at public-health.williams.edu.

PHLH 201 (S) Dimensions of Public Health (DPE)
Public health is concerned with protecting and improving health at the level of a community or population. Although individual behavior is an essential element of public health, collective, rather than individual, outcomes are the focus of public health study. In this course we will survey the field of public health, introducing students to core concepts and methods that highlight the interrelationship of individual choice and social institutions with environmental and biological factors in producing health outcomes at the population level. We will develop these concepts and methods within the context of signal cases and public health crises, covering infectious disease epidemics and prevention, sexual health, and mental health.

Class Format: lecture

Requirements/Evaluation: two papers on a selected population or country and health issue, two short reaction papers, peer reviews and active contribution to class discussion, including on Glow
Global malnutrition continues to represent one of the most challenging issues of international development. Problems of both under- and over-nutrition beginning as early as in utero can detrimentally influence the health, development and survival of resource-limited populations. This course introduces students to the most prevalent nutritional issues through a food policy perspective and exposes them to a wide variety of interventions, policies and current debates in the field of international nutrition. In addition to exploring the multi-level programmatic approaches for the prevention and treatment of the related nutritional problems, students will gain exposure and experience in program design and program proposal writing. Readings will involve both real-world programmatic documents/evaluations as well as peer-reviewed journal articles. Examples will be drawn from Africa, Asia and Latin America.

Class Format: seminar

Requirements/Evaluation: six 1-page essays, one situation analysis paper (5-7 pages), one final term paper (10-15 pages), one oral presentation, and active class participation

Extra Info: may not be taken on a pass/fail basis; not available for the fifth course option
Prerequisites: PHLH 201 or equivalent
Enrollment Limit: 19
Enrollment Preferences: Public Health concentrators
Expected Class Size: 19

Distributions: (D2) (DPE) (WI)

Distribution Notes: DPE: This course exposes the issues of difference, power and inequity by exploring the unequal distribution of resources and power at the global, national and intra-national level within the international nutrition context. We will also critically engage with issues of power, cultural difference and related ethics in the context of nutrition program design and implementation. WI: As a WI course, students will write six 1-page essays (each with an optional rewrite) and a 5- to 7-page, country assessment paper which will help build the specific writing skills necessary for the final 10- to 15-page paper.

Attributes: PHLH Nutrition, Food Security + Environmental Health;

Fall 2018

PHLH 250 (F) Qualitative Research Methods in Public Health

Qualitative methods provide the opportunity to add in-depth meaning and context regarding research on individuals and the environments of study. This course introduces students to qualitative research theory in Public Health and gives them the opportunity to ‘practice’ three qualitative research methods; (1) in-depth interviewing, (2) focus groups and (3) participant observation. Students will have the opportunity to pilot each of these three qualitative research methods, analyze a subset of the data via qualitative analysis software, and design a qualitative research study (including the
research instrument). We will cover best practices in reporting qualitative results (for the purposes of peer-reviewed publication) and learn about the advantages and disadvantages of qualitative research in various domestic and international settings related to public health (such as nutrition, HIV and physical activity).

**Class Format:** seminar

**Requirements/Evaluation:** three 1-page reflection papers, transcription/field notes of one qualitative method (5-7 pages), one research proposal (10-15 pages), and an oral presentation

**Prerequisites:** PHLH 201 or equivalent

**Enrollment Limit:** 19

**Enrollment Preferences:** Public Health concentrators

**Expected Class Size:** 15

**Distributions:** (D2)

**Attributes:** PHLH Methods in Public Health

*Not offered current academic year*

**PHLH 255 (S) Research Methods in Public Health**

This course will introduce students to three common research methods utilized within Public Health: qualitative methods, survey methods and epidemiology. We will cover the basic research design process, integrating and comparing the qualitative methods of interviewing and focus groups, survey instrument design and pretesting as well as basic epidemiologic methods and concepts. Readings and discussions will engage with best practices in reporting these types of methods (for the purposes of peer-reviewed publication). Lastly, students will have the opportunity to design research instruments, pilot some of these methods, and analyze a subset of the data via analysis software. Students who have taken PHLH 250 should not enroll in PHLH 255.

**Class Format:** seminar

**Requirements/Evaluation:** three 1-page reflection papers, development of two research instruments (3-5 pages), one critique of a journal article (5 pages), an oral presentation and active class participation

**Prerequisites:** PHLH 201 or equivalent AND at least one Statistics course

**Enrollment Limit:** 19

**Enrollment Preferences:** Public Health concentrators

**Expected Class Size:** 15

**Distributions:** (D2)

**Attributes:** PHLH Methods in Public Health

*Spring 2019*

**SEM Section:** 01  M 7:00 pm - 9:40 pm  Marion Min-Barron

**PHLH 402 (S) Senior Seminar in Public Health**

The capstone seminar provides concentrators with the opportunity to reflect upon and synthesize their experiential learning in the context of understanding gained from a cohesive set of elective courses, and through the lens of a variety of intellectual and disciplinary frameworks. A second goal is to give concentrators experience working in a multi-disciplinary team to address a real-world, and in many cases very daunting, public health problem. Students will read, discuss, and compose written reflections on primary source empirical papers addressing a range of issues and disciplines in the field of public health. For example, topics may include the social determinants of health, environmental health risks, and access to health care. Students will also be divided into three or four research teams to investigate a contemporary real-life issue in public health by designing a study; collecting and analyzing data; and disseminating findings by written report and formal oral presentation to the public health advisory committee faculty.

The capstone course is required of all concentrators, but may be opened to other students with relevant experience at the discretion of the instructor and the advisory committee, if space permits.

**Class Format:** seminar/lab

**Requirements/Evaluation:** active seminar participation, written reflections, contribution to the team research project, and a 12- to 15-page final paper

**Extra Info:** may not be taken on a pass/fail basis; not available for the fifth course option
Prerequisites: completion of at least four courses counting towards the PHLH concentration

Enrollment Limit: 14

Enrollment Preferences: senior Public Health concentrators; students who are not senior Public Health concentrators should contact the instructor

Expected Class Size: 14

Distributions:

Attributes: PHLH Core Courses

Spring 2019

SEM Section: 01  MR 1:10 pm - 2:25 pm  Amie A. Hane, Marion Min-Barron
LAB Section: 02  W 1:00 pm - 4:00 pm  Amie A. Hane, Marion Min-Barron