Epidemiology and Public Health

EPH 100a and EPH 101b, Professional Skills Series  Felicia Spencer and William Vance
The Professional Skills Series is intended to prepare M.P.H. students for leadership positions as public health professionals. Material covered includes public speaking, presentation skills, professional writing, negotiation and conflict resolution, and networking and social media. Attendance at all sessions is required (elective for Advanced Professional M.P.H. and Accelerated M.B.A./M.P.H. students), and some homework is a part of the program. Although no credit or grade is awarded, satisfactory performance will be noted on the student’s transcript.  o Course cr per term

EPH 500b, Public Health Practicum  Susan Nappi
This course is one of the options available to students to fulfill the practice requirement for the M.P.H. degree. The course design combines experiential learning and guided classroom discussion. Students are assigned to a field placement in an appropriate setting that affords the opportunity to apply public health concepts and competencies learned in the classroom through a practice experience that is relevant to the students’ areas of specialization. Emphasis is placed on situating students in community-based organizations and other public health service settings such as local or state health departments, where they can work on authentic public health problems and issues. This course provides a means for students to gain exposure to the mission and activities of diverse public health organizations and thus may help to inform their decisions about professional work pursuits upon completion of the M.P.H. degree. Open only to second-year M.P.H. students, Advanced Professional M.P.H. students, and Accelerated M.B.A./M.P.H. students.

EPH 505a, Biostatistics in Public Health  Michael Wininger
This course provides an introduction to the use of statistics in medicine and public health. Topics include descriptive statistics, probability distributions, parameter estimation, hypothesis testing, analysis of contingency tables, analysis of variance, regression models, and sample size and power considerations. Students develop the skills necessary to perform, present, and interpret statistical analyses using R software.

EPH 507a, Social Justice and Health Equity  Danya Keene
This course outlines the social and structural determinants related to health inequities in the United States and globally. Conceptual, theoretical, methodological, and empirical approaches to understanding social justice and health equity are explored, with a focus on health determinants including health care, social class, poverty, oppression and power, stigma and discrimination, and neighborhood and social factors. The course takes a multidisciplinary approach, integrating methods and research from epidemiology, social sciences, and medicine to explore the individual, interpersonal, community, and societal influences that lead to healthy and unhealthy outcomes.

EPH 508a, Foundations of Epidemiology and Public Health  Linda Niccolai
This course presents an introduction to epidemiologic definitions, concepts, and methods. Topics include history of epidemiology, descriptive epidemiology, measurement of disease occurrence and association, study design (ecologic, cross-sectional, case-control studies, cohort, and intervention), surveillance, measurement validity and screening, random variation and precision, bias, confounding, effect modification, and causality. The course also teaches skills for quantitative problem solving and for understanding epidemiologic concepts in the published literature.

EPH 510a, Health Policy and Health Care Systems  Mark Schlesinger
This course provides an introduction to the making, understanding, and consequences of health policy. The design and performance of the health care system are assessed, with particular attention to the complex and often contested manner in which health care is organized, financed, and delivered in the United States. The course also considers the fundamental concerns—such as cost, access, and quality—that shape the development of health policy and health systems in all countries, and it looks to the health systems of other countries in order to understand the advantages and disadvantages of alternative approaches. An overview of the important actors in the health care and political systems is provided, and students are introduced to methods for understanding the behavior of these policy makers and stakeholders. Health issues are placed in the context of broader social goals and values.

EPH 513b, Major Health Threats: Determinants and Solutions  Catherine Yecel and Krystal Pollitt
This course introduces students to three major health threats: global climate change, antibiotic resistance, and type 2 diabetes mellitus. The goal is to achieve foundational knowledge of environmental factors in population health; ecological perspectives in human, animal, and ecosystem health (one health); biological and genetic factors that affect population health; as well as the impact of globalization on global disease burden. The course’s modular format includes mixed lecture, case study, and vignette approaches. Small, cross-disciplinary groups are used throughout the term to actively apply concepts, hone data interpretation skills, and frame research and health solution projects. Importantly, this group structure is used to implement an overarching leadership skills module to permit conversations, problem solving, and projects for each module. The course culminates in planning, designing, communicating, and pitching innovative solutions to major health threats.

EPH 515a, Ethics and Public Health: An Introduction  Kaveh Khoshnood
This four-session seminar introduces students to the ethical implications of public health programs, policies, and research initiatives; their historical roots; and the regulations and guidelines governing human subjects research in the United States and internationally. Case studies are used to demonstrate selected ethical challenges in public health policy, practice, and research. In addition, students learn the functions and procedures of Yale’s Human Research Protection Program and complete its web-based training on human subjects research. M.P.H. students are required to take the course during the first year of the program.  o Course cr
By studying the experience of others in the field of global health, students are also able to apply lessons learned from past examples of health damages. Policy and business innovation is also essential to implement pollution preventive efforts while maintaining patient safety and quality care. In this course, interdisciplinary student teams perform applied public health or practice projects related to health care, sustainability science, and public health. Each team works with a clinical (physician or nurse) and/or management mentor from Yale New Haven Hospital or its affiliates, or in collaboration with partners such as the National Health Service Sustainable Development Unit of the United Kingdom. Each group uses the opportunity to apply concepts and competencies learned in the classroom to the field of health care. This course should be of interest to graduate and professional students across the University and is open to Yale College juniors and seniors. In addition, this course is one of the options available to students to fulfill the practice requirement for the M.P.H. degree at YSPH and the capstone requirement for the M.E.M. degree at the Yale School of the Environment. Enrollment is by application only; check the Yale Center on Climate Change and Health website or the course's Canvas site for more information.

**EPH 556, Health Care Environmental Sustainability Practicum**

If the U.S. health care sector were a nation itself, it would rank thirteenth in the world for greenhouse gas emissions. Health care is an enormous and complex system, in need of environmental health assessment and sustainability science to measure and mitigate pollution and public health damages. Policy and business innovation is also essential to implement pollution preventive efforts while maintaining patient safety and quality care. In this course, interdisciplinary student teams perform applied public health or practice projects related to health care, sustainability science, and public health. Each team works with a clinical (physician or nurse) and/or management mentor from Yale New Haven Hospital or its affiliates, or in collaboration with partners such as the National Health Service Sustainable Development Unit of the United Kingdom. Each group uses the opportunity to apply concepts and competencies learned in the classroom to the field of health care. This course should be of interest to students from the Schools of Public Health, Environment, Management, Medicine, and Nursing. This course is one of the options available to students to fulfill the practice requirement for the M.P.H. degree and the ENV capstone requirement. 1 Course cr

**EPH 557b, Evidence-Based Decision-Making in Global Health**

This course is a capstone seminar for M.P.H. students in the Global Health Concentration. Through a mixture of teaching approaches including lecture, large- and small-group discussion, case studies, practicum sessions, and student-led experiential learning, students study and apply principles of evidence-based decision-making in global health to their specific area(s) of interest. Students learn how to define evidence and explore different types of evidence that are and have been used in global health evidence-informed decision-making. By analyzing case studies, students also examine what has and has not been considered evidence in global health decisions, and they develop critical-thinking approaches to enable evaluation of both the quality and robustness of evidence, as well as potential gaps. By studying the experience of others in the field of global health, students are also able to apply lessons learned from past examples of global health evidence-based decision-making to their own work and interest area(s). The final product for this course is a fifteen-page
paper summarizing how the principles and practice of global health evidence-based decision-making apply to each student’s interest area. Prerequisites: completion of one year of an M.P.H. program and a global summer M.P.H. internship experience.

**EPH 570a and EPH 571b, Seminar in Climate Change and Health**  Robert Dubrow and Kai Chen

In this two-term, monthly, not-for-credit seminar, students are introduced to a wide variety of topics related to climate change and health. The seminar features talks by Yale faculty, as well as invited speakers from other institutions. Students are expected to read one or two relevant papers in advance of each talk and to articulate questions for the speaker. This course is specifically targeted for students in the Climate Change and Health Concentration but is open to all members of the YSPH and Yale communities. Two terms of this seminar are required of students in the Climate Change and Health Concentration. Although no credit or grade is awarded, satisfactory performance will be noted on the student’s transcript.  o Course cr per term

**EPH 580a and EPH 581b, Seminar for Modeling in Public Health**  A. Paltiel and Theodore Cohen

This yearlong, monthly seminar is targeted most specifically to students in the Public Health Modeling Concentration but open to all interested members of the Yale community. The seminar features talks by faculty from across Yale University doing modeling-related research, as well as invited speakers from other universities and public health agencies. The objectives are to offer students the opportunity to witness the scope and range of questions in public health policy and practice that may be addressed, understood, and informed using model-based approaches; appreciate the breadth of public health modeling research being conducted around the University and beyond; explore possible collaborations/relationships with other scholars and professionals; review, critique, and evaluate model-based public health research in a structured environment; and form their own opinions regarding the applicability, relevance, and responsible use of modeling methods. Two terms of this no-credit seminar are required of students in the Public Health Modeling Concentration. For each class, one or two readings are circulated/posted on the course website prior to the talk. Students are encouraged to read the articles and articulate questions for the speaker.  o Course cr per term

**EPH 591a, Global Health Seminar**  Michael Skonieczny

This weekly seminar exposes students in the health professions to key issues in global health research and practice. The course features faculty from across the health professional schools and other global health experts from around the world. Its collaborative nature provides a rich environment for interdisciplinary dialogue. The goal is for students to attain a good understanding of key issues upon which they may base future research, service, and clinical pursuits in the field of global health. Although no course credit is awarded, satisfactory performance is noted on the student’s transcript.  o Course cr

**EPH 600a, Research Ethics and Responsibility**  Christian Tschudi

This course seeks to introduce major concepts in the ethical conduct of research and some of the personal and professional issues that researchers encounter in their work. Sessions are run in a seminar/discussion format. Prerequisite: doctoral student or postdoctoral status only.  o Course cr

**EPH 608a or b, Frontiers of Public Health**  Staff

This course is designed to expose students to the breadth of public health and is required of M.S. and Ph.D. students who do not have prior degrees in public health. It explores the major public health achievements in the last century in order to provide students with a conceptual interdisciplinary framework by which effective interventions are developed and implemented. Case studies and discussions examine the advances across public health disciplines including epidemiology and biostatistics, environmental and behavioral sciences, and health policy and management services that led to these major public health achievements. The course examines global and national trends in the burden of disease and underlying determinants of disease, which pose new challenges; and it covers new approaches that are on the forefront of addressing current and future public health needs.