

Core Courses for Students Who Enrolled Prior to Fall 2018

Biostatistics and Applied Data Analysis

Students must take one of the following two sequences:

Sequence 1

Biostatistics and Data Analysis I (PHP 2507)

This course, the first in a year long, two-course sequence, is for students to develop the knowledge, skills and perspectives necessary to analyze data in order to answer a public health questions. The year long sequence will focus on statistical principles as well as the applied skills necessary to answer public health questions using data, including: data acquisition, data analysis, data interpretation and the presentation of results.

&

Biostatistics and Data Analysis II (PHP 2508)

The second course in the year long sequence.

Or

Sequence 2

Principles of Biostatistics and Data Analysis (PHP 2510)

Intensive first course in biostatistical methodology, focusing on problems arising in public health, life sciences, and biomedical disciplines. Summarizing and representing data; basic probability; fundamentals of inference; hypothesis testing; likelihood methods. Inference for means and proportions; linear regression and analysis of variance; basics of experimental design; nonparametrics; logistic regression.

&

Applied Regression Analysis (PHP 2511)

Applied multivariate statistics, presenting a unified treatment of modern regression models for discrete and continuous data. Topics include multiple linear and nonlinear regression for continuous response data, analysis of variance and covariance, logistic regression, Poisson regression, and Cox regression.

Epidemiology

Students must take one of the following two courses:

Introduction to Methods in Epidemiologic Research (PHP 2120)

Epidemiology quantifies patterns and determinants of human population health, with a goal of reducing the burden of disease, injury, and disability. An intensive first course in epidemiologic methods, students learn core principles of study design and data analysis through critiques of published epidemiologic studies as well as hands on practice through weekly exercises and assignments.

Or

Foundations in Epidemiologic Research Methods (PHP 2150)

The overall objective of this course is to provide students with a strong foundation in epidemiologic research methods. This is the first of a two- or four-course sequence in epidemiologic methods aimed at students who expect to go on to conduct their own epidemiologic research. There will be a strong quantitative focus in this course. By the

Core Courses for Students Who Enrolled Prior to Fall 2018

end of the foundations course, students should be sufficiently familiar with epidemiologic research methods to begin to apply these methods to their own work.

Environmental Health Courses

Students must take one of the following three courses:

Current Topics in Environmental Health (PHP 1700)

This course is designed to introduce students to the field of environmental health, and demonstrate how environmental health is integrated into various aspects of our lives, both directly and indirectly. Topics to be covered include: toxic metals, vector-borne disease, food safety, water quality, radiation, pesticides, air quality, hazardous waste, risk assessment, and the role of the community in environmental health.

Or

Topics in Environmental and Occupational Epidemiology (PHP 2220E)

Introduces students to the subject matter of environmental and occupational epidemiology, focusing on the major environmental threats to health and provides the methodologic tools to evaluate and extend the evidence linking those exposures to disease through studies of populations.

Or

Climate Change and Human Health (PHP1710)

Global climate change is occurring and these changes have the potential to profoundly influence human health. This course provides students with a broad overview of the diverse impacts of projected climate change on human health, including effects of changing temperatures, extreme weather events, infectious and non-infectious waterborne threats, vector-borne disease, air pollution, the physical and built environment and policies to promote mitigation and adaptation. Students will explore multiple sides of controversial issues through lively and informed class discussions, writing exercises, and participation in a series of end-of-term debates.

Social and Behavioral Health Courses

Students must take one of the following four courses:

Designing and Evaluating Public Health Interventions (PHP 2355)

Previously listed as PHP 1740. Examines health behavior decision-making and elements for design of health promotion interventions. Covers theories of health behavior (focusing on primary and secondary prevention), principles of intervention design, and reading of research literature. Emphasizes psychological, social, and proximate environmental influences on individuals' health-related behaviors. Restricted to undergraduates in the AB/MPH program, and graduate students.

Or

Developing and Testing Theory-Driven, Evidenced Based Psychosocial and Behavioral Health Interventions (PHP 2360)

This is a graduate-level course designed to provide students with the knowledge and research skills necessary to develop and ultimately test a theory-driven, evidence-based psychosocial or health behavior change intervention. Drawing on research, theory, and practice, students learn how to conduct formative research to inform the content,

Core Courses for Students Who Enrolled Prior to Fall 2018

structure, and format of an intervention, set goals/objectives, develop intervention materials/messages, and evaluate outcomes – all while taking into account factors such as gender, sexuality, race/ethnicity, poverty, culture, social-support/social-capital, etc. Research methods that are relevant for examining efficacy, including study-design, power/sample size calculations, fidelity monitoring, randomization, control conditions, measures selection/assessment, data collection, etc. are covered.

Or

Health Communications (PHP 2380)

This class will explore Health Communication, with a focus on behavioral and social science interventions delivered through health communication programs. The course is structured so that basic building blocks (i.e., definitions of health communication, public health context for health communications interventions, theories of health communication and health behavior change) are presented sequentially early in the semester. Students will synthesize knowledge and demonstrate their understanding of the role of health communication through a final research project.

Or

Implementing Public Health Programs and Interventions in the Global South (PHP2720)

This course will focus on the theory and methods related to closing gaps in health disparities through the collection and evaluation of data with the aim of increasing the impact of evidence-based public health interventions and the effectiveness of healthcare delivery in diverse resource-limited settings across the globe. This course will focus on the influence of social, structural, political, and organizational processes on the development, adaptation, implementation, and evaluation of public health interventions in the Global South. We will review the emerging field of implementation science and critically analyze approaches for the evaluation of ongoing global public health programs. Pre Requisites: This course is required for students in the Global Public Health ScM program and is designed to be taken in the second semester of the program.

Health Services Administration Courses

Students must take one of the following two courses:

Comparative Health Care Systems (PHP 1100)

Focuses on principles of national health system organization and cross-national comparative analysis. Emphasizes application of comparative models to the analysis of health and health-related systems among nations at varying levels of economic development and health care reform.

Or

The U.S. Health Care System: Case Studies in Financing, Delivery, Regulation and Public Health (PHP 2400)

Reviews the development of the health care delivery, financing and regulatory control systems in the U.S. and reviews the literature on the relationship between health system structure and the services used and health outcomes that populations experience. A case-study approach is used to understand the inter-relationship between financing, delivery and regulatory components of the health system and their implication for public health by drawing on epidemiological, economic, political and sociological principals

Internship

Core Courses for Students Who Enrolled Prior to Fall 2018

Students must take the following course:

Public Health/Community Service Internship (PHP 2070)

The course is an introduction to the history, organization, resources, concepts and issues of public health and health care. Students will be matched according to their interests in a related practical experience in a health-related organization, with the expectation that they complete a project or produce a product of public health utility.

Research Methods

Students must take one of the following courses:

Clinical Trials (PHP2030)

We will examine the modern clinical trial as a methodology for evaluating interventions related to treatment, rehabilitation, prevention and diagnosis. Topics include the history and rationale for clinical trials, ethical issues, study design, protocol development, sample size considerations, quality assurance, statistical analysis, systematic reviews and meta-analysis, and reporting of results. Extensively illustrated with examples from various fields of health care research. *(Fall)*

Or

Survey Research Methods (PHP 2040)

Emphasizes the theory of sampling and survey methods and their application to public health research. Topics include: survey design and planning; principles of sampling and survey terminology; questionnaire construction; protection of human subjects; data collection (including interviewing and data coding procedures); and application, presentation, and evaluation of results. *(Spring)*

Or

Qualitative Methods (PHP2060)

Introduces qualitative approaches to data collection and analysis in health research. Methods covered include: participant observation, key-informant interviews, focus groups, innovative data collection strategies, and non-obtrusive measures. Students will use applied projects to develop skills in: qualitative data collection and management, interviewing, transcript analysis using computerized software, triangulation between qualitative and quantitative data, and report preparation for qualitative studies. *(Spring)*

Or

Behavioral Research Methods (PHP2300)

This course provides students with fundamental principles of behavioral and social research methodology for understanding the determinants of public health problems, and for executing and testing public health interventions. We will focus on experimental methods, observational studies, and qualitative approaches. We will develop skills in understanding and interpreting data--both quantitative and qualitative. Throughout the course we will emphasize ethical, cultural, and professional issues for designing public health interventions.

Or

Intro to Evidence Based Medicine (PHP2415)

Unbiased assessments of the scientific literature by means of research synthesis methods are critical for formulating public health policy, counseling patients or prioritizing future research. We focus on the methods and uses of systematic reviews and meta-analyses and their applications in medicine and health policy. After course completion, and with some direction, students will be able to undertake a basic systematic review or meta-analysis.

Core Courses for Students Who Enrolled Prior to Fall 2018

Or

Intro to GIS (GEOL1320)

Introduction to the concepts of geospatial analysis and digital mapping. The principles of spatial data structures, coordinate systems, database development and design, and techniques of spatial analysis are learned. This is an applied course, primarily using ESRI-based geographic information system software. Focal point of class is the completion of student-selected research project employing GIS methods. *(Fall)*

Or

Geographic Information Systems and Spatial Analysis for the Social Sciences (SOC2612)

This course is intended for graduate students seeking to learn the basics of Geographic Information Systems (GIS) and how to incorporate spatial questions into social science research. The course is primarily a methods course and through required independent project work, students will learn how GIS and spatial analysis are typically employed across the social sciences. By the end students will be proficient in independent use of ArcGIS, most frequently used GIS software package, and will be able to apply the more common tools of spatial analysis. They will also know basics of cartography. *(Taught every other year)*