PHC 6001: Principles of Epidemiology in Public Health
Instructor: Catalina Lopez-Quintero, MD, PhD
Credits: 3
Tuesdays, 10:40a-12:35p or 1:55p-3:50p
Grading Scheme: Letter
HPNP 1102
Prerequisites: None.
This course provides and understanding of epidemiologic methods frequently used to study disease patterns in community and clinic-based populations. Course topics include distribution and determinants of health-related states or events in specific populations and application to control of health problems.

PHC 6003: Epidemiology of Chronic Diseases and Disability
Instructors: David S. Sheps, MD, MSPH, and Krishna Vaddiparti, PhD, MPE, MSW
Credits: 3
Credits: 3
Grading Scheme: Letter
Grading Scheme: Letter
Prerequisites: PHC 6001 and PHC 6052 or PHC 6050, or permission from the instructor.
This course is an overview of the epidemiology of chronic diseases and disabilities prevalent in various populations; it includes the introduction of contemporary methods for surveillance, including risk factors, etiology, and changes over time.

PHC 6016: Social Epidemiology
Instructor: Krishna Vaddiparti, PhD, MPE, MSW
Credits: 3
Thursdays, 8:30a-11:30a
Grading Scheme: Letter
HPNP G-108
Prerequisites: PHC 6000, PHC 6001, and PHC 6410, or permission from the instructor.
This course explores the social determinants of population health, including acute and chronic disease outcomes, and health behavior. The course introduces methodological approaches to the field of social epidemiology with specific attention to measurement issues.

PHC 6517: Public Health Concepts in Infectious Diseases
Instructor: Diana Rojas Alvarez, MD, PhD
Credits: 3
Mondays, 10:40a-11:30a; Wednesdays, 9:35a-11:30a
Grading Scheme: Letter
HPNP G-111
Prerequisites: PHC 6001 and PHC 6002, or permission from the instructor.
In this course, students will learn to analyze the epidemiologic research methods used to obtain evidence of emergence of infectious diseases, transmission pathways, prevention strategies, and the range of factors that influence the severity of individual health outcomes; will be able to systematically examine research evidence related to a number of relevant emerging and existing infectious diseases of the 21st century; and will design an original research study to answer a specific research question.
PHC 6711: Measurement in Epidemiology and Outcomes Research  
Instructor: Ting-Yuan (David) Cheng, PhD  
Credits: 3  
Grading Scheme: Letter  
Prerequisites: PHC 6001 and PHC 6050 or equivalent, or permission from the instructor.
This course focuses on principles of measurement in epidemiologic/health outcomes research studies, particularly in the use of primary data collection studies. Special emphases include: reliability and validity studies; ROC curves; reducing and adjusting for measurement error; questionnaire design and interviewing methods; use of record resources (e.g., medical records, administrative data); and measurement using biomarkers, environmental measures, and molecular methods. Measurement in outcomes research in infectious diseases, physical activity, neuropsychology, psychopathology, addictions, and environmental epidemiology will be examined as examples in the course.

PHC 6937: Hospital Epidemiology  
Instructor: Cindy Prins, PhD, MPH, CIC, CPH  
Credits: 3  
Grading Scheme: Letter  
Prerequisites: At least two epidemiology courses (PHC 600 and PHC 6000) and two Biostatistics courses (PHC 6052 and PHC 6053). Students also need to have familiarity with basic microbiology terms and techniques, so other pre-requisites for this course are PHC 6370, PHC 6002, PHC 6517, or an undergraduate- or graduate-level microbiology course (with instructor approval).
This PhD-level course will cover topics in hospital epidemiology through online lectures that supplement in-class discussions of the literature and study designs in hospital epidemiology, and hands-on learning through tours of hospital units.

PHC 6937: Maternal and Child Health Epidemiology  
Instructor: Deepthi Varma, PhD, MPhil, MSW  
Credits: 2  
Grading Scheme: Letter  
Prerequisites: PHC 6001, or permission from the instructor.
This course is designed to provide an understanding of how epidemiological concepts can be applied to the study of maternal and child mortality and morbidity. Course topics include health indicators, measures related to maternal and child mortality and morbidity, social and environmental determinants, and the impact of culture and societal norms on maternal and child health. The national- and global-level policies and programs for improving health will also be discussed.

PHC 7595: Introduction to Molecular Epidemiology  
Instructor: Lusine Yaghjyan, MD, MPH, PhD  
Credits: 3  
Grading Scheme: Letter  
Prerequisites: PHC 6001 and knowledge of basic concepts in epidemiology and study designs, or permission from the instructor.
This course will explore theoretical concepts in molecular epidemiology and use of biomarkers in epidemiologic studies. Class topics include: basics of molecular epidemiology, potential uses and limitations of biomarkers, sample collection and storage, issues in epidemiologic study design and analysis, and discussion of specific research examples involving molecular markers.
**PHC 7901: Epidemiology Literature Review and Critique (Journal Club)**

Instructor: Linda B. Cottler, PhD, MPH, FACE  
Credits: 1  
Grading Scheme: S/U  
Fridays, 9:35a-10:25a  
CTRB 4240C  

*Prerequisites: Graduate student standing, or permission from the instructor.*

This course will prepare students to perform peer-review and to think critically. In weekly class discussion sessions, students will review peer-reviewed, published research studies that demonstrate innovative or faculty epidemiologic content or methods. Feedback will be given by student peers and faculty.

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**PHC 7934: Seminar I: Epidemiology Past, Present, and Future**

Instructor: Lusine Yaghjyan, MD, MPH, PhD  
Credits: 2  
Grading Scheme: Letter  
Fridays, 10:40a-12:35p  
HPNP 1101  

*Prerequisites: PhD standing, or permission from the instructor.*

The principal goals of this doctoral seminar include becoming familiar with major programs of research in epidemiology, discussing findings and implications of classic/prominent epidemiologic studies, reviewing the strengths and weakness of major epidemiologic study designs, and applying knowledge of epidemiologic study design to students’ formulation of their own research studies.