PHC 6001: Principles of Epidemiology in Public Health

Format: In Person

Instructor: Heather Stark, MD, MPH

Credits: 3

Grading Scheme: Letter

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 6001: Principles of Epidemiology in Public Health

Format: Online Asynchronous

Instructor: Volker Mai, PhD, MPH

Credits: 3

Grading Scheme: Letter

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

Format: Online Synchronous

Instructor: Stephen E. Kimmel, MD, MSCE
Hung Luu, MD, PhD

Credits: 3

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 in Public Health
Format: In Person
Instructor: Krishna Vaddiparti, PhD, MPE, MSW
Credits: 3
Grading Scheme: Letter
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
Format: In Person
Instructor: Marie Nancy Séraphin, PhD
Credits: 3
Grading Scheme: Letter
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 6591: Maternal and Child Health Epidemiology
Format: In Person
Instructor: Deepthi S. Varma, PhD, MPhil, MSW
Credits: 3
Grading Scheme: Letter
Prerequisites: PHC 6001 and PHC 6000 (or equivalent research methods coursework). Students with no prior instruction in epidemiology but with methodological coursework from another related discipline may be admitted with permission from the instructor.
This is a 3-credit course offered on campus to graduate students on the epidemiology of maternal and child health. This course is designed to provide a graduate level understanding of how epidemiological principles can be applied to maternal and child mortality and morbidity.

PHC 6711: Measurement in Epidemiology and Outcomes Research
Format: In Person
Instructor: Natalie Chichetto, PhD, MSW
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 6932: Psychiatric Epidemiology Online Seminar Series
Format: Online Asynchronous
Instructor: Catherine W. Striley, PhD, MSW, ACSW, MPE
Credits: 1
Grading Scheme: S/U
Prerequisites: None.
Epidemiology seminars from the Department of Epidemiology and other epidemiology departments, and associated publications, will be used to provide students with an understanding of new developments in the field of epidemiology as applied to psychiatric epidemiology.

PHC 6937: Core Seminar in the Translational Science of Alcohol and HIV Infection
Format: Online Synchronous
Instructor: TBA
Credits: 1
Grading Scheme: Letter
Prerequisites: None.
In addition to alcohol and HIV research, this course will also cover several professional development topics including the academic job search process, non-academic jobs and “How to be a professor.” Seminars will be led by a rotating group of faculty-level experts, primarily from here at UF, but with some external speakers.

PHC 6939: CPE Psychiatric Grand Rounds
Format: Online Asynchronous
Instructor: Catherine W. Striley, PhD, MSW, ACSW, MPE
Credits: 1
Grading Scheme: S/U
Prerequisites: None.
World-renowned experts are invited to address a wide spectrum of specialties and sub-specialties and often introduce new and interesting developments. Mental health care professionals and epidemiologists will receive up-to-date information on trends and techniques in psychiatry.

PHC 7017: Advanced Epidemiologic Methods III
Format: In Person
Instructor: Yan Wang, PhD
Credits: 3
Grading Scheme: Letter HPNP G-108
Prerequisites: GMS 6800 and GMS 6810, or permission from the instructor.
This advanced course will focus on the application of seven advanced analytical and modeling methods through lectures, actual data analysis, student presentation and discussion to expand the methodology inventory by introducing advanced and new statistical and modeling methods to address measurement, descriptive, comparative, associative, machine learning, and causal relations in modern epidemiology.
**PHC 7595: Introduction to Molecular Epidemiology**

**Format:** In Person  
**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.

**GMS 7858: Causal Artificial Intelligence for Health Research**

**Format:** In Person  
**Instructor:** Takis Benos, PhD  
**Jie Xu, PhD**  
**Credits:** 3  
**Grading Scheme:** Letter  
**Prerequisites:** Graduate student standing, or permission from the instructor.

This course will cover foundational issues in “causal AI” embedding machine learning with causal inference methods on real-world data, and methodologies for automated causal learning. Health research approaches such as target trials, and transportability will be discussed. Artificial Intelligence fairness tackling health disparities and inequity will be explored.

**PHC 7901: Epidemiology Literature Review and Critique (Journal Club)**

**Format:** In Person  
**Instructor:** Cindy Prins, PhD, MPH, CIC, CPH  
**Credits:** 1  
**Grading Scheme:** S/U  
**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.

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

**Format:** In Person  
**Instructor:** Stephen E. Kimmel, MD, MSCE  
**Credits:** 2  
**Grading Scheme:** Letter  
**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.