COLLEGE *of* PUBLIC HEALTH & HEALTH PROFESSIONS

Department of Epidemiology
Spring 2024 Course Offerings

PHC 6000: Epidemiology Methods I

Format: In Person

Instructor: Kelly K. Gurka, MPH, PhD

Credits: 3   Wednesdays, 6:15 p-9:15p

Grading Scheme: Letter   HPNP - G-301

Prerequisites: PHC 6001 and PHC 6050 or PHC 6052, or permission from the instructor.

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: Krishna Vaddiparti, PhD, MPE, MSW

Credits: 3   Online Asynchronous

Grading Scheme: Letter

Prerequisites: None.

This course is an introduction to epidemiology for students majoring in any aspect of the health sciences. This course presents the principles and methods of the epidemiological investigation of both infectious and non-infectious diseases. The purpose of this course is to equip students with the necessary knowledge and skills to explain the place of epidemiology in the general health thinking and to communicate and apply the basic principles of epidemiology.

PHC 6441: Understanding Health Disparities in the United States

Format: Online Asynchronous

Instructor: Shantrel Canidate, PhD, MPH

Credits: 3   Online Asynchronous

Grading Scheme: Letter

Prerequisites: PHC 6001, or permission from the instructor.

This course will review determinants that influence health outcomes of the most disadvantaged populations in the United States. Special attention will be given to socioeconomic, racial, ethnic, and gender status and their relationships with health disparities and inequities. We are going to discuss why culturally competent public health programs are needed to eliminate health disparities in the United States.

PHC 6937: Introduction to Mixed Methods Research

Format: In Person
Instructor: Deepthi Varma, PhD, MPhil, MSW
Credits: 3   Mondays, 8:30a-11:30a
Grading Scheme: Letter   HPNP G-110
Prerequisites: PHC 6001 Principles of Epidemiology in Public Health and PHC 6000 Epidemiology Methods I (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 3-credit, on-campus course will introduce mixed methods research concepts to master's and doctoral level students. This course focuses on the design and implementation of research that combines qualitative and quantitative data collection, and will discuss the purpose of "mixing methods" and ways to integrate qualitative and quantitative data.

PHC6937: Preparing for the Field: Developing Key Skills for Applied Health Department Work

Format: In Person
Instructor: Jerne Shapiro, MPH

Credits: 3   Tuesdays, 1:55p-2:45p
                                                        Thursdays, 1:55p-3:50p
Grading Scheme: Letter   HPNP G-301A
PHC6001 (Principles of Epidemiology), or consent of the instructors

This course introduces key skills needed to respond to urgent public health problems while working at a state or local health department. Students will participate in hands-on activities to learn how to identify emergent public health concerns, implement targeted interventions, and communicate findings to prevent further illness. Skills include conducting outbreak investigations, interviewing cases, developing communication tools and educational materials, and identifying key stakeholders.

PHC 7007: Cancer Epidemiology

Format: In Person
Instructor: Volker Mai, PhD, MPH

Credits: 3   Mondays, 11:45a-12:35p
                                                        Wednesdays, 10:40a-12:35p
Grading Scheme: Letter   HPNP - G-301A
Prerequisites: PHC 6001 and PHC 6050 or PHC 6052, or permission from the instructor.
This course is designed to help students develop the interdisciplinary skills required for evaluating various existing and hypothetical public health interventions aimed at reducing the burden of cancer in the US and worldwide. The course will familiarize students with various exposures associated with the risk of developing cancer with emphasis on a population perspective. While a focus will be on opportunities for prevention; we will explore cellular mechanisms contributing to the development of various cancers and describe associated pathologies. Cancer epidemiology is taught in a combined lecture and discussion format.

PHC 7038: Psychiatric Epidemiology

Format: In Person
Instructor: Catherine W. Striley, PhD, MSW, ACSW, MPE
**Credits:** 3   Mondays, 12:50p-3:50p
Grading Scheme: Letter   COM CG-22
Prerequisites: PHC 6000 and PHC 6011, or permission from the instructor.
This advanced epidemiology methods course in Psychiatric Epidemiology will cover concepts, history, measures, methods and analytic techniques to study the risks, prevalence and incidence, course, comorbidities and consequences of major mental disorders (mood and anxiety disorders, schizophrenia, personality disorders, alcohol and drug abuse and dependence). Psychiatric epidemiology studies in general and specific populations internationally will be discussed for their methods, measures and findings.
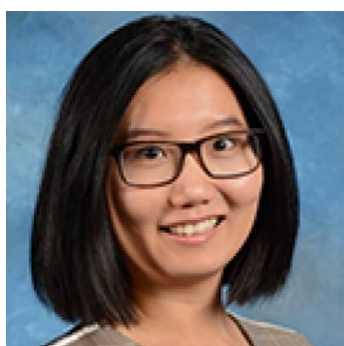
PHC 7065: Advanced Skills in Epidemiological Data Management

Format: In Person
Instructor: Yiyang Liu, PhD, MPH
Credits: 2   Tuesdays, 3:00p-4:55p
Grading Scheme: Letter   HPNP-G-110
Prerequisites: PHC 6052 and PHC 6000 or the equivalent and PhD student status, or permission from the instructor.
This course focuses on providing basic knowledge and skills needed in data manipulation for population science. Included will be: data context and concepts; relational databases; data collection and extraction; Parallel manipulation of massive datasets; NoSQL systems and concepts. The course is designed for advanced students to learn the "code of best practice" for data engineering in population science.

PHC 7199: Topics in Precision Medicine and Public Health Informatics

Format: In Person
Instructor: Simone Marini, PhD
**Credits:** 1   Every other Tuesday, 10:40a-12:35p
Grading Scheme: Letter   CTRB 4240C
Prerequisites: PHC 6000, PHC 6011, and a SAS course, or equivalent graduate statistical and quantitative research courses in any relevant department, or permission from the instructor.
This course covers topics in precision medicine and public health informatics. The course was inspired by the White House 2015 initiative in precision medicine which stated that its mission is "to enable a new era of medicine through research, technology, and policies that empower patients, researchers, and providers to work together toward development of individualized care." Students will learn how the initiative is being concretized since its inception, by studying real-world examples, and deepening on both the methodological and translational aspects
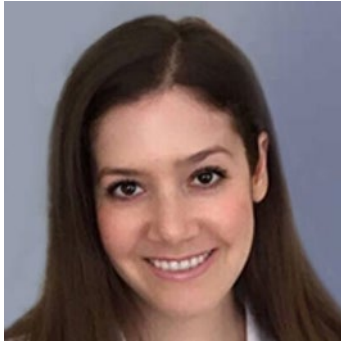
PHC 7902: Scientific Writing for Peer Reviewed Publications for Population Science

Format: Online Synchronous

Instructor: Ashley J. Malin, PhD

Credits: 1	Mondays, 5:10p-7:05p
Grading Scheme: Letter	Online Synchronous

Prerequisites: Graduate student status, 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 each other's work and bring work to edit and share. Feedback will be given by student peers and the course instructor. The principal goals of this Epidemiology Writing Circle are to: 1) improve the student's academic writing style, 2) write, complete, and submit papers – with at least one as a first author, and 3) edit colleague's manuscripts, regardless of topic area.