



COLLEGE of PUBLIC HEALTH & HEALTH PROFESSIONS  
COLLEGE of MEDICINE

## EPIDEMIOLOGY

# FALL 2024 COURSE OFFERINGS



### PHC6001: Principles of Epidemiology n Public Health

**Instructor:** Shama Karanth, PhD

**Credits:** 3

HPNP G307

**Grading Scheme:** Letter

**Tuesdays: 1:55 - 3:50 pm**

*Prerequisites: None.*

Epidemiology methods frequently used to study disease patterns in community and clinic-based populations. Includes distribution and determinants of health-related states or events in specific populations and application to control of health problems.



### PHC6001: Principles of Epidemiology n Public Health

**Instructor:** Marie Séraphin, PhD

**Credits:** 3

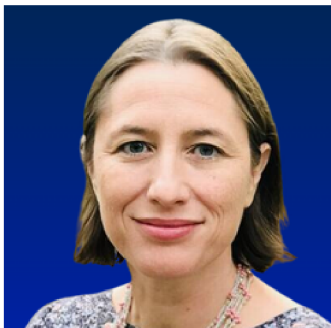
HPNP G201

**Grading Scheme:** Letter

**Tuesdays: 10:40 - 12:35 pm**

*Prerequisites: None.*

Epidemiology methods frequently used to study disease patterns in community and clinic-based populations. Includes distribution and determinants of health-related states or events in specific populations and application to control of health problems.



### PHC6001: Principles of Epidemiology n Public Health

**Instructor:** Jerne Shapiro, MPH

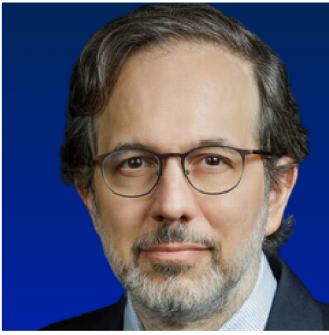
**Credits:** 3

**Grading Scheme:** Letter

**Online Asynchronous**

*Prerequisites: None.*

Epidemiology methods frequently used to study disease patterns in community and clinic-based populations. Includes distribution and determinants of health-related states or events in specific populations and application to control of health problems.



## PHC6003: Epidemiology of Chronic Diseases and Disability

**Instructor:** Stephen E. Kimmel, MD, MSCE

**Credits:** 3

CTRB 4240C

**Grading Scheme:** Letter

**Thursdays: 3:00 - 6:00 pm**

*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.



## PHC6016: Social Epidemiology in Public Health

**Instructor:** Krishna Vaddiparti, PhD

**Credits:** 3

HPNP G110

**Grading Scheme:** Letter

**Thursdays: 8:30 - 11:30 am**

*Prerequisites: PHC 6000, PHC 6001, PHC 6410, or consent of instructor.*

Social determinants of population health, including acute and chronic disease outcomes, and health behavior. Introduces methodological approaches to the field of social epidemiology with specific attention to measurement issues.



## PHC6517: Public Health Concepts in Infectious Diseases

**Instructor:** Volker Mai, PhD

**Credits:** 3

HPNP G316

**Grading Scheme:** Letter

**Wednesdays: 9:35 - 12:35 pm**

*Prerequisites: PHC 6001 and PHC 6002.*

Topics and methods used in modern infectious disease epidemiology.



## PHC6591: Maternal and Child Health Epidemiology

**Instructor:** Deepthi Varma, PhD, MSW, MPhil

**Credits:** 3

HPNP G105

**Grading Scheme:** Letter

**Mondays: 8:30 - 11:30 am**

*Prerequisites: PHC 6001 and PHC (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.





## **PHC6711: Measurement in Epidemiology and Outcomes Research**

**Instructor:** Natalie Chichetto, PhD, MSW

**Credits:** 3

HPNP 1101

**Grading Scheme:** Letter

**Thursdays: 12:50 - 2:10 pm**

*Prerequisites: PHC 6001 and PHC 6050 or equivalent.*

Major designs and principles of measurement for epidemiology and health services outcomes research, with emphasis on use of primary data collection.

---

---



## **PHC6932: Psychiatric Epidemiology Online Seminar Series**

**Instructor:** Catherine W. Striley, PhD, MSW, ACSW, MPE

**Credits:** 1

**Grading Scheme:** S/U

**Online Asynchronous**

*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.

---

---



## **PHC6939: CPE Psychiatric Grand Rounds**

**Instructor:** Catherine W. Striley, PhD, MSW, ACSW, MPE

**Credits:** 1

**Grading Scheme:** S/U

**Online Asynchronous**

*Prerequisites: Enrollment in Certificate in Psychiatric Epidemiology*

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.

---

---



## **PHC7595: Introduction to Molecular Epidemiology**

**Instructor:** Lusine Yaghjian, MD, MPH, PhD

**Credits:** 3

Online Asynchronous

**Grading Scheme:** Letter

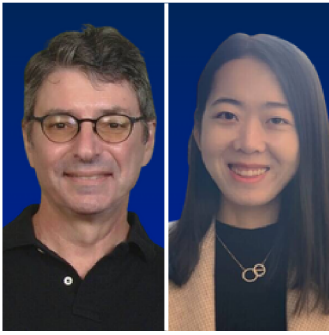
**Tuesdays: 9:35 - 12:35 pm**

*Prerequisites: Knowledge of basic concepts in epidemiology and study designs: PHC 6001*

Covering the 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/GMS7858: Causal Artificial Intelligence for Health Research

**Instructor:** Takis Benos, PhD & Jie Xu, PhD

**Credits:** 3

Malachowsky Hall 7146

**Grading Scheme:** Letter

**Mondays: 9:35 - 12:35 pm**

*Prerequisites: Instructor approval.*

This course covers foundational issues in “causal Artificial Intelligence” 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, as well as Artificial Intelligence fairness to tackle health disparities and inequity.

---

---



## PHC7901: Epidemiology Literature Review and Critique (Journal Club)

**Instructor:** Linda B. Cottler, PhD, MPH, FACE

**Credits:** 1

Online Asynchronous

**Grading Scheme:** S/U

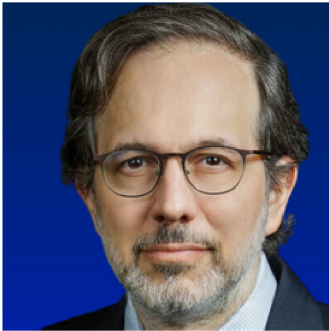
**Mondays: 5:10 - 7:05 pm**

*Prerequisites: PhD candidacy status or permission from the instructor.*

Preparing 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.

---

---



## PHC7934: Seminar I: Epidemiology Past, Present, and Future

**Instructor:** Stephen Kimmel, MD, MSCE

**Credits:** 2

CTRB 4240C

**Grading Scheme:** Letter

**Fridays: 10:40 - 12:35 pm**

*Prerequisites: PhD standing*

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.

---

---