

EPIDEMIOLOGY (EPI)

EPI 0100 - Epidemiology and Biostatistics

0-4 Credits

This course is an introduction to the basic concepts of medical epidemiology and biostatistics. Learning methodology includes lectures, assigned readings, and small group workshops. The course focuses on acquiring the skills required to understand and assess biomedical research.

EPI 4000 - Intro Epidemiology: Foundations & Practice

3 Credits

Epidemiology forms the scientific rationale for public health assessment, assurance, and program/policy development. This course introduces students to foundational principles of epidemiology, including outcome measures, surveillance, and study design. Historical and current examples are used to demonstrate the applications of epidemiology in public health practice. (Offered Fall and Spring)

Prerequisite(s): (MATH 1400 with a grade of C- or higher, SLU Math Placement with a minimum score of 1510, or 1 Course from MATH 1510-4999)

Attributes: Health Management Major Electi, IPE - Research, Public Health Minor Elective

EPI 4930 - Special Topics

3 Credits (Repeatable for credit)

EPI 4980 - Advanced Independent Study in Epidemiology

1 or 3 Credits (Repeatable for credit)

EPI 5020 - Epidemiology Methods II

3 Credits

This course is offered to graduate students who desire more intensive training in epidemiologic research methods than offered in EPI 5000. This course covers observational study designs, infectious disease outbreak analysis, sampling methods, statistical power, multivariate analysis, types of bias, and causal inference. Offered annually.

Prerequisite(s): PUBH 5030 with a grade of B- or higher

Attributes: MPH-Behavior Sci & Health Equi, MPH-Global Health, MPH-Health Management & Policy, MPH-Public Health Practice, MPH-Biostatistics

EPI 5110 - Epidemiology of Infectious Disease

3 Credits

The history of epidemiology and infectious diseases are intricately intertwined. Our understanding of Infectious Diseases requires an integration of phenomenal advances including newly recognized pathogens, explosion of diagnostic technology, hosts with unprecedented compromised states, a better understanding of dynamic demographic and sociocultural forces, and improvements in study design, analysis, and modeling. (Offered annually.)

Prerequisite(s): (EPI 5000 or PUBH 5030)

Attributes: MPH-Behavior Sci & Health Equi, MPH-Biosecurity & Disaster Prp, MPH-Epidemiology, MPH-Health Management & Policy, MPH-Maternal & Child Health, MPH-Public Health Practice, MPH-Biostatistics

EPI 5120 - Chronic Disease Epidemiology

3 Credits

This course considers some of the major substantive issues and methods used in chronic disease epidemiology. Emphasis will be on the application of epidemiologic principles and methods related to cancer, cardiovascular diseases, psychiatric illness, and other chronic diseases. Topics include classification of diseases, rates, associations, etiology, prevention, and control. (Offered every year)

Prerequisite(s): (EPI 5000 or PUBH 5030)

Attributes: MPH-Behavior Sci & Health Equi, MPH-Epidemiology, MPH-Health Management & Policy, MPH-Maternal & Child Health, MPH-Public Health Practice, MPH-Biostatistics, Social Work PhD Specilization

EPI 5220 - Maternal and Child Health Epidemiology

3 Credits

Explores epidemiologic methods/research related to MCH public health practice. Emphasis is placed on synthesizing research that potentially challenges current public health policy and communicating the findings to policy makers. Includes analysis of infant mortality and selected reproductive, perinatal and child health issues such as infant mortality, childhood obesity, lead poisoning, prenatal substance abuse, and prenatal and childhood HIV infection. Policy implications are discussed.

Prerequisite(s): (BST 5000, BST 5020, or PUBH 5040); (EPI 5000 or PUBH 5030)

Attributes: MPH-Behavior Sci & Health Equi, MPH-Epidemiology, MPH-Global Health, MPH-Health Management & Policy, MPH-Maternal & Child Health, MPH-Biostatistics

EPI 5230 - Applied Epidemiology

3 Credits

The course is delivered in a lecture format, combining lectures and guest speakers. Guest lectures will feature experienced epidemiologists, data scientists, and public health professionals to provide practical insights and professional development opportunities. Note, this is an in-person course. Therefore, there is no live Zoom classroom. All course material is located on Canvas. Hard copies of course materials will generally not be distributed.

Prerequisite(s): PUBH 5030; PUBH 5040; EPI 5020

Attributes: MPH-Behavior Sci & Health Equi, MPH-Health Management & Policy, MPH-Public Health Practice, MPH-Biostatistics

EPI 5235 - Applied Epidemiology Lab

2 Credits

The course is delivered in a lab-style format, combining group discussions and hands-on workshops. Students will participate in weekly in-class activities and complete a series of applied assignments that build toward a final research presentation and manuscript. Note, this is an in-person course. Therefore, there is no live Zoom classroom. All course material is located on Canvas. Hard copies of course materials will generally not be distributed. (Offered annually.)

Prerequisite(s): EPI 5020 with a grade of B- or higher

Corequisite(s): EPI 5230

Attributes: MPH-Behavior Sci & Health Equi, MPH-Health Management & Policy, MPH-Public Health Practice, MPH-Biostatistics

EPI 5270 - Cancer Epidemiology

3 Credits

This course provides an overview of concepts related to cancer epidemiology, including cancer biology, etiology, surveillance, and study design. Classic examples and current topics will be used to explore the role of epidemiology in addressing disparities, policies, and population-based approaches to cancer prevent and control.

Prerequisite(s): (EPI 5000 or PUBH 5030)

EPI 5500 - Environmental and Occupational Epidemiology

3 Credits

This course presents the epidemiological methods used to investigate the health effects of occupational and environmental exposures to toxins. Epidemiological evidence concerning the health effects of selected occupational and environmental exposures will be critically reviewed and evaluated. (Offered annually)

Prerequisite(s): PUBH 5030 with a grade of C or higher

Attributes: MPH-Epidemiology, MPH-Global Health, MPH-Maternal & Child Health, MPH-Biostatistics

EPI 5930 - Special Topics

3 Credits

EPI 5970 - Research Topics in Epidemiology

1-3 Credits

This course provides direct research experience in epidemiology. Content is developed jointly between the student(s) and a faculty mentor.

EPI 5980 - Graduate Independent Study in Epidemiology

1-3 Credits

This course provides specialized study in epidemiology to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

EPI 6030 - Clinical Epidemiology

3 Credits

This course explores the various observational and experimental research designs utilized in clinical and epidemiological studies. Its primary objective is to equip students with the skills necessary to critically evaluate clinical research and data effectively. By establishing a solid foundation in scientific methods, the course prepares students to engage actively in clinical research projects and to practice evidence-based medicine.

Prerequisite(s): PUBH 5030*

* Concurrent enrollment allowed.

Attributes: MPH-Biosecurity & Disaster Prp, MPH-Epidemiology, MPH-Maternal & Child Health, MPH-Public Health Practice, MPH-Biostatistics

EPI 6070 - The Science and Practice of Research Synthesis

3 Credits

The course combines short lectures, seminar discussions, and applied workshops. Weekly three-hour sessions include conceptual overviews, case analyses, and hands-on exercises. Lectures introduce key concepts and frameworks in research synthesis, while discussions and workshops promote critical reflection and methodological application. Structured exercises guide students through each stage of the systematic review process—from framing questions and designing searches to appraising evidence and synthesizing findings. Progressive assignments and peer feedback culminate in a publication-ready systematic review protocol registered on the Open Science Framework (OSF). The course emphasizes scholarly exchange and peer collaboration, reflecting the collective and iterative nature of the research synthesis process.

Attributes: Public Health Major Elective, Social Work PhD Methods

EPI 6930 - Special Topics

3 Credits (Repeatable for credit)

EPI 6970 - Advanced Research Topics in Epidemiology

1-3 Credits

EPI 6980 - Graduate Independent Study in Epidemiology

1-3 Credits (Repeatable for credit)