

EPIDEMIOLOGY (EPI)

EPI 0100 - Epidemiology and Biostatistics

Credit(s): 0-3 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

Credit(s): 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 every Fall and Spring)

Prerequisite(s): (1 Course from MATH 1400-49999 or MATH 1320)

EPI 4930 - Special Topics

Credit(s): 3 Credits (Repeatable for credit)

EPI 4980 - Independent Study

Credit(s): 1 or 3 Credits (Repeatable for credit)

EPI 5000 - Principles of Epidemiology

Credit(s): 3 Credits

This course is an introduction to epidemiology, which is the study of the distribution and determinants of disease in human populations and the application to the control of health problems. Topics will include analytic reasoning in public health and disease surveillance, descriptive and analytic study designs, and causal inference. Basic statistical measures used in the analysis of epidemiologic studies, including measures of disease frequency and measures of association, will be covered.

Restrictions:

Students with a semester level of Freshman, Junior or Sophomore may not enroll.

EPI 5020 - Epidemiology Methods II

Credit(s): 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): EPI 5000; (BST 5000 or BST 5020)

EPI 5110 - Epidemiology of Infectious Disease

Credit(s): 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

EPI 5120 - Chronic Disease Epidemiology

Credit(s): 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

EPI 5220 - Maternal and Child Health Epidemiology

Credit(s): 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 or BST 5020); EPI 5000

EPI 5230 - Applied Epidemiology

Credit(s): 3 Credits

This course provides students with an understanding of the applications of epidemiology in public health and health care settings. It includes a brief review of key epidemiologic concepts; examples of the use of epidemiologic data in public health planning, health services decision-making and policy making; and case studies of current issues in epidemiology. Individual student projects involve data collection, analysis, and/or dissemination. (Offered annually.)

Prerequisite(s): (BST 5000 or BST 5020); EPI 5000

EPI 5250 - Social Epidemiology

Credit(s): 3 Credits

This course will provide a survey of the social determinants of health (e.g. socioeconomic status, race/ethnicity, social capital and neighborhood influences) with emphasis on methods and issues of measurement of social factors, and advanced methodologies in social epidemiology (e.g. community-based participatory research, GIS and spatial mapping, multi-level modeling)

Prerequisite(s): BST 5000; EPI 5000

EPI 5270 - Cancer Epidemiology

Credit(s): 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; (BST 5000 or BST 5020)

EPI 5280 - Perinatal Epidemiology

Credit(s): 3 Credits

Issues related to the perinatal period from the framework of epidemiologic methods will be examined in the course through critical review of epidemiologic studies and exploration of design issues for this population. The students will also learn to apply perinatal research principles to data analysis in perinatal research through in-class data analysis exercise and individual research project.

Prerequisite(s): EPI 5000; (BST 5000 or BST 5020)

EPI 5500 - Environmental and Occupational Epidemiology

Credit(s): 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): EOH 5000; EPI 5000

EPI 5930 - Special Topics

Credit(s): 3 Credits

EPI 5960 - Capstone in Epidemiology

Credit(s): 3 Credits

The purposes of this course are 1) to develop the practical statistical skills to analyze an epidemiologic data set, and 2) to learn to write a scientific paper in the form of a journal article from the results of epidemiologic data analysis. Stratified analysis and modeling using main effects logistic regression will be emphasized.

Prerequisite(s): BST 5200, BST 5100, BST 5000, EPI 5000, EPI 5020, and BST 5210*

* Concurrent enrollment allowed.

EPI 5970 - Research Topics in Epidemiology

Credit(s): 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 Reading in Epidemiology

Credit(s): 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 6930 - Special Topics

Credit(s): 3 Credits (Repeatable for credit)

EPI 6970 - Research Topics in Epidemiology

Credit(s): 1-3 Credits

EPI 6980 - Graduate Reading in Epidemiology

Credit(s): 1-3 Credits (Repeatable for credit)