Epidemiology Courses (EPID)

This is a list of all epidemiology courses. For more information, see Epidemiology.

EPID:3099 Evidence-Based Public Health Methods 3 s.h.
How to choose, conduct, and evaluate evidence-based programs and policies in public health; finding and using scientific evidence, implementing and evaluating interventions that produce new evidence. Offered summer sessions. Requirements: Certificate in Public Health enrollment.

EPID:4314 Field Experiences in Public Health 1 s.h.
Direct involvement in actions being taken at local community level; topics include environmental health, infectious diseases, chronic diseases, and pediatric health; practical examples and hands-on experiences during site visits for topic-specific field investigations. Prerequisites: BIOL:1140 or BIOL:1141 or BIOL:1411. Requirements: biology or microbiology course work. Same as CPH:4250.

EPID:4400 Epidemiology I: Principles 3 s.h.
Epidemiological concepts and methods; design of descriptive and analytic studies, such as aggregate, case series, cross-sectional, case-control, cohort studies, clinical trials; application of epidemiology to public health practice; communication and dissemination of epidemiological findings.

EPID:4450 Public Health Data 2 s.h.
Concepts and methods of obtaining and using public health data in community settings; how public health data are used for epidemiologic investigations and prevention programs. Corequisites: EPID:4400.

EPID:4510 Injury and Violence Prevention 3 s.h.
Theory, research, and practice of injury control; unintentional and intentional injuries; local, national, international injury issues. Same as CPH:4230, OEH:4510.

EPID:4990 Practicing Evidence-Based Public Health 3 s.h.
How epidemiologic and other scientific studies underlie public health practice; relationship between evidence and action; controversies at interface of science and policy.

EPID:5200 Principles of Public Health Informatics 3 s.h.
Systematic applications of information science, computer science, and technology to public health practice, research, and learning; methods of disease surveillance, data collection, analysis, and reporting with health informatics. Same as IGPI:5220.

EPID:5214 Meta-Analysis of Epidemiologic Studies 3 s.h.
Methods for quantitative pooling of analytic study associations (cohort and case-control) between exposure and a dichotomous outcome; literature searches, data abstraction, test of homogeneity, publication bias and consideration of adjusted risk ratios (effects of confounding). Prerequisites: BIOS:5120 and EPID:4400.

EPID:5241 Statistical Methods in Epidemiology 4 s.h.
Overview of methods to analyze data from epidemiologic investigations; estimation of relative measures of risk, attributable risk, stratified analysis; model-fitting approaches using linear, logistic, and Poisson regression analysis; confounding and effect modification; analysis of epidemiologic data sets.
EPID:5590 Applied Infectious Disease Epidemiology 2 s.h.
Introduction to infectious disease surveillance, outbreak investigations, interventions, biodefense, emerging infectious diseases, subject recruitment, mathematical modeling, and analytic approaches pertaining to infectious disease prevention and control; emphasis on practical knowledge and how to apply basic infectious disease epidemiology to real-life scenarios and research projects.

EPID:5600 Introduction to Epidemiology Data Management and Analysis 3 s.h.
Organization, collection, management, and analysis of epidemiological data using computer programs. Corequisites: EPID:4400, if not taken as a prerequisite.

EPID:5610 Intermediate Epidemiology Data Analysis with SAS and R 3 s.h.
Basic principles of data analysis and collaborative research; SAS fundamentals; data manipulation and interpretation techniques.

EPID:5630 Seminar in Clinical and Translational Research 1 s.h.
Presentation of ongoing clinical research projects, grant applications, and methodological articles, with emphasis on works in progress.

EPID:5900 Problems and Special Topics in Epidemiology arr.
Didactic material in epidemiology; may include tutorial, seminar, faculty-directed independent work (e.g. literature search, project, short research project); topics may include comparative effectiveness and patient-centered outcomes, neuroepidemiology, and epidemiology of aging.

EPID:5925 Epidemiology Journal Club: Evaluating the Literature 0 s.h.
Critical evaluation of primary epidemiologic methods and research papers; informative, challenging, and current topics from scientific literature. Requirements: epidemiology M.S., M.P.H., or Ph.D. standing.

EPID:5950 Preceptorship in Epidemiology arr.
Quantitative research-oriented project performed with a preceptor; preparation of prospectus, presentation of research results in a publication-quality report and a scientific poster session.

EPID:6000 Independent Study in Epidemiology arr.
In-depth pursuit of an area of special interest in epidemiology requiring substantial creativity and independence.

EPID:6050 Research in Epidemiology arr.
Research that may lead to a dissertation.

EPID:6070 Social Epidemiology 3 s.h.
Introduction with global focus and emphasis on methodological issues, including definition/measurement of social constructs, appropriate research designs, analytic approaches. Prerequisites: EPID:4400.

EPID:6075 Health Equity, Disparities, and Social Justice 3 s.h.
Introduction to the concept of health equity and an overview of U.S. health disparities; students gain a better understanding of research and interventions through readings, lectures, reflection papers, in-class exercises, and research assignments. Same as CBH:6230.

EPID:6100 Writing a Grant Proposal 3 s.h.
Small group projects to develop grant proposals using epidemiological study designs; presentation and defense of proposals before faculty site visitors.

EPID:6110 Grant Writing for Clinical Investigators arr.
Development of skills for writing effective, scientifically sound applications for external research grants; for students who have completed the literature review section for their topic. Prerequisites: EPID:4400.

EPID:6150 Writing for Medical Journals 1 s.h.
Skill development in writing medical journal articles for publication.

EPID:6200 Environmental and Occupational Epidemiology 3 s.h.
Overview of methods to interpret and perform environmental and occupational epidemiologic studies with focus on exposure assessment; valuable insights into identifying regional, national, global environmental, and occupational health-related issues. Prerequisites: EPID:4400. Same as OEH:6510.

EPID:6250 Genetics and Epidemiology 3 s.h.
Basic human molecular genetics and population genetics principles; methods of integrating genetic principles into epidemiological studies; advancing genomic technologies, hot topics in genetics research. Prerequisites: EPID:4400.

EPID:6330 Global Nutrition Policy 1,3 s.h.
Concepts and methods used in setting public health nutrition policy; evidence-based aspects of nutrition policy formation in public health settings; evaluation of nutritional public health policy implementation and ways of changing policy in China, Korea, Micronesia, Hawaii, Italy, and the United States.

EPID:6350 Nutritional Epidemiology 2 s.h.
Application of epidemiology study designs to nutrition variables and chronic disease; analysis of nutrition epidemiology studies; research protocol design. Recommendations: a basic nutrition course.

EPID:6360 Nutrition Intervention in Clinical Trials Research 2 s.h.
Nutrition interventions in clinical trials; disease related to nutrition variables; research that links effects of diet on chronic diseases. Recommendations: a basic nutrition course.

EPID:6370 Nutrition Intervention in Research Lab 3 s.h.
Development, demonstration of group counseling skills in ongoing nutrition research projects at the University of Iowa. Corequisites: EPID:6360, if not taken as a prerequisite.

EPID:6400 Epidemiology II: Advanced Methods 4 s.h.
Epidemiologic study design and analysis; bias, confounding, effect modification; case-control studies; cohort studies; field methods; measurement principles; exposure and disease classification; acute and chronic disease examples. Prerequisites: EPID:4400 and EPID:5600.

EPID:6420 Survey Design and Analysis 3 s.h.
Methodological issues regarding design, sampling approach, implementation, analysis, and interpretation of surveys and questionnaires in public health research. Offered spring semesters of even years. Prerequisites: EPID:4400 and BIOS:5120. Same as BIOS:6420.

EPID:6510 Injury Epidemiology 3 s.h.
How epidemiology can be applied to injury prevention and control: epidemiology literature, specific methodological problems involved in the epidemiology of injuries, critical evaluation of research articles. Offered spring semesters of odd years. Prerequisites: EPID:4400. Same as OEH:6520.
EPID:6530 Epidemiology of Occupational Injuries  
3-4 s.h.  
Epidemiological literature on occupational injuries and their prevention; focus on research methods. Offered spring semesters of even years. Prerequisites: EPID:4400. Same as OEH:6530.

EPID:6550 Epidemiology of Infectious Diseases  
3 s.h.  
Underlying epidemiological concepts of infection disease, including causation and surveillance; prevention and control; case studies. Prerequisites: EPID:4400. Same as GHS:6550.

EPID:6560 Hospital Epidemiology  
2 s.h.  
Health care-associated infections; surveillance, investigative methods, resistant organisms, molecular epidemiology; methods for preventing spread of pathogens, including isolation precautions; environmental issues, construction, sterilization; interactive exercises. Prerequisites: EPID:4400.

EPID:6570 Infectious Causes of Chronic Disease  
3 s.h.  
Evidence linking various infectious agents with the development of different types of chronic disease. Corequisites: EPID:4400, if not taken as a prerequisite.

EPID:6600 Epidemiology of Chronic Diseases  
3 s.h.  
Chronic disease epidemiology; survey of leading chronic diseases, including measurement of disease, lifestyle, nutrition, occupation, family history. Prerequisites: EPID:4400.

EPID:6620 Neuroepidemiology  
2 s.h.  
Basic epidemiologic concepts of neurologic disease; concepts, methods, examples of neuroepidemiology; varied diseases, methods. Prerequisites: EPID:4400 and EPID:5600.

EPID:6640 Epidemiology of Maternal and Infant Health  
2 s.h.  
Overview of maternal and infant epidemiologic and methodologic issues; prevalence and trends; risk factors; data sources, including limitations and availability; relevant measurement issues; directions for future research. Prerequisites: EPID:4400.

EPID:6650 Cardiovascular Disease Epidemiology  
3 s.h.  
Natural history of atherosclerotic disease in humans and risk factors affecting its development; atherosclerotic disease by age, sex, and in varied populations worldwide; recent guidelines and clinical trials to delay onset, reduce incidence, improve outcome of cardiovascular disease. Prerequisites: EPID:4400.

EPID:6670 Psychiatric Epidemiology  
3 s.h.  
Population-based studies of psychiatric disorders and associated etiologic tools; diagnostic criteria used in psychiatric research, common structured interviews and rating scales; recent research relevant to common psychiatric disorders; experience writing a research idea using NIH PHS grant form. Recommendations: EPID:6400 or two years of resident training in psychiatry. Same as PSYC:8267.

EPID:6700 Cancer Epidemiology and Control  
3 s.h.  
Incidence, mortality, survival; risk factors for major cancers; comprehensive cancer control; introduction to SEER*Stat and its application. Prerequisites: EPID:4400 and PATH:8133.

EPID:6900 Design of Intervention and Clinical Trials  
3 s.h.  
Methodologic introduction to rationale and design of clinical trials; basics of clinical trial design, variety of designs, and examples from clinical trials. Prerequisites: EPID:4400.

EPID:6910 Pharmacoepidemiology and Comparative Effectiveness Research  
3 s.h.  
Drug approval process, methods for identification and attribution of adverse drug events, current understanding of the epidemiology of adverse drug events; study designs, data sources for pharmacoepidemiology, pharmacoconomics. Prerequisites: EPID:4400.

EPID:6920 Applied Administrative Data Analysis  
2 s.h.  
Concepts and methods for analysis of administrative health insurance claims data; focus on understanding the types and sources of data, useful resources for classifying data, and applying SAS programming skills and common analytic approaches to studies using such data. Prerequisites: EPID:5610 or BIOS:5310 or BIOS:5510. Requirements: EPID:5610 or BIOS:5310 or BIOS:5510 or SAS programming experience; and (concurrent or prior enrollment in BIOS:5120 and BIOS:5730) or (EPID:5241 and EPID:5610) or prior equivalent biostatistical course work or experience.

EPID:6950 Clinical Research Ethics  
2 s.h.  
Ethical and regulatory aspects of clinical research; historical background, current regulations, Institutional Review Board requirements related to human subjects protection issues. Requirements: K30 training grant or enrollment in degree program with clinical research project.

EPID:7000 Thesis/Dissertation  
arr.

EPID:7200 Teaching in Epidemiology  
3 s.h.  
Teaching methods in epidemiology; guided practicum experience in teaching epidemiology, in preparation for academic careers. Prerequisites: EPID:4400 and EPID:5600 and EPID:6400.

EPID:7400 Epidemiology III: Theories  
3 s.h.  
How epidemiology fits into the wider context of scientific inquiry. Prerequisites: EPID:4400 and BIOS:6110 and EPID:6400.