

PBH - Public Health

Public Health: PBH

Lower-Division Courses

PBH 317. Introduction to Public Health.

Overview and basic principles of public health, including the public health system, concepts and tools for measuring health in populations, the relationship between public health and the medical care system, and the role of law and government in public health. Three lecture hours a week for one semester. Biology 317 and Public Health 317 may not both be counted.

PBH 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Public Health.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

Upper-Division Courses

PBH 320. Topics in Health Informatics and Health Information Technology.

Concepts, theories, and issues in health informatics and health information technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Biology 325 or 325H with a grade of C-.

Topic 1: Introduction to Health Informatics and Healthcare Analytics.

Restricted to students enrolled in the Health Informatics and Health Information Technology Professional Education Program. Consists of didactic lectures about the theoretical foundations of health informatics, database theory and management, healthcare standards, medical decision making, and healthcare analytics. Includes four hands-on workshops that relate to subjects taught in this course: HL7, SQL, Microsoft Excel, Microsoft Access, and Tableau. Also includes a research project over a six-eight week time period, production of a professional poster, and a presentation in a research poster forum judged by faculty, industry representatives, healthcare professionals, and policy makers.

Topic 2: Fundamentals of Health Information Technology. Restricted to students enrolled in the Health Informatics and Health Information Technology Professional Education Program. Explores healthcare policy (including privacy and security), current technologies (telemedicine, hospital information systems and computer and networking technologies) and the interoperable exchange of healthcare data.

Topic 3: Project Management, Process Redesign and Quality Improvement. Restricted to students enrolled in the Health Informatics and Health Information Technology Professional Education Program. Explores the basics of project management, including requests for proposals, scope, project planning, budgets and deliverables. Also discussed is an analysis of workflow processes and the impact of technology to improve these processes. Quality improvement, including tools to improve quality, is also presented. Includes several individual assignments and one team project.

Topic 4: Operational Models of Healthcare Systems. Restricted to students enrolled in the Health Informatics and Health Information Technology Professional Education Program. Explores the complex United States (US) health care system and explains the manner by

which health care is delivered along a continuum of care. A special emphasis is placed on the operational delivery of ambulatory care and the manner in which acute care facilitates are evolving. Subjects include a comparison of the US health care system to health care delivery in other countries, population health and health care finance/insurance - including discussion on public (Medicare and Medicaid) and private (Managed Care) coverage. Descriptions of current and emerging payment mechanisms, revenue cycle management, risk management, overhead reduction and practice management are covered in detail to allow students a robust understanding of business issues associated with health care delivery.

Topic 5: Technology Competencies in Health Informatics and Health Information Technology.

Restricted to students enrolled in the Health Informatics and Health Information Technology Professional Education Program. Hands-on laboratory, team-taught by program faculty and staff with support from industry partners. Utilization of multiple health informatics and health information technology systems, health information exchange and interoperability software, and key analytics tools. This laboratory builds upon concepts taught in Public Health 320, Topic 1 and Public Health 320, Topic 2.

Topic 6: Practicum and Professional Development in Health Informatics and Health IT.

Restricted to students enrolled in the Health Informatics and Health Information Technology Professional Education Program. Professional development lectures, activities, and a ten-day practicum experience off campus to experience working with industry, healthcare systems, policy makers, and other experts in the field.

PBH 323. Introduction to Health Informatics.

Introduces theoretical foundations of health informatics, database theory and management, healthcare standards, and medical decision making. Only one of the following may be counted: Biology 337 (Topic: Introduction to Health Informatics), 353, Public Health 323.

PBH 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Public Health.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

PBH 330. Topics in Public Health.

Concepts, theories, and issues in public health. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Biology 325 or 325H with a grade of at least C-.

PBH 334. Global Health.

An investigation of global health issues, including the principles of global health, the burden of morbidity and mortality, health determinants, health care and public health systems, socioeconomic development, and human rights. Three lecture hours a week for one semester. Biology 334 and Public Health 334 may not both be counted. Prerequisite: Public Health 356 and 358D with a grade of at least C- in each.

PBH 137, 237, 337, 437. Selected Topics in Public Health.

Recent developments and research methods in the field of public health will be explored. For each semester hour of credit earned, one lecture hour a week for one semester. Some topics may require additional hours. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

Topic 1: Senior Seminar in Public Health. Restricted to Public Health majors. Discuss public health importance, learn how to demonstrate scholarly and applied experience in public health, and prepare to enter the public health workforce or continue in advanced public health or other professional programs. Additional prerequisite: The following coursework with a grade of at least C- in each: PBH 317, PBH 354, SDS 328M or 320E, PBH 356 and PBH 358D.

PBH 338. Environmental Health.

Introduction to the major areas of environmental health presented in the context of epidemiology, toxicology, and health effects. Subjects include water and air quality, solid and liquid waste, hazardous chemicals, radiation, infectious agents, food safety, and occupational health. Three lecture hours a week for one semester; several field trips to be arranged outside of the lecture. Prerequisite: Public Health 356 and 358D with a grade of at least C- in each.

PBH 341R. Public Health Research.

Conduct research mentored by public health practitioners at governmental agencies, non-governmental organizations, or health care facilities. The equivalent of twelve fieldwork hours a week for one semester. May be repeated for credit. Prerequisite: Public Health 354 with a grade of at least C- and consent of instructor.

PBH 354. Epidemiology I.

Restricted to public health majors. Introduction to basic principles and concepts in epidemiology, including descriptive epidemiology, association and causation, basic epidemiological study design, evidence-based decision analysis, and applications of epidemiology methods to basic and clinical science. Three lecture hours a week for one semester. Prerequisite: Public Health 317 with a grade of at least C-; and credit with a grade of at least C- or registration for Biology 325 or 325H, and Statistics and Data Sciences 320E or 320H (or credit for Statistics and Data Sciences 328M).

PBH 356. Health Behavior Theory and Practice.

Restricted to public health majors. An introduction to social and behavioral theories that inform the discipline of public health and applied public health practice, including practical examples of how these theories inform and influence health promotion to understand and modify health-related behaviors. Focus on health inequities and inequalities of populations living in the United States and how underlying cultures and social structures impact the health of individuals and communities. Three lecture hours a week for one semester. Only one of the following may be counted: Public Health 356, 368D, or Sociology 368D. Prerequisite: The following coursework with a grade of at least C- in each: Public Health 354, Biology 325 or 325H, and Statistics and Data Sciences 320E or 320H (or credit for Statistics and Data Science 328M).

PBH 358D. Health Policy and Health Systems.

Explore an overview of the U.S. health care system and the impact of policy and legislative actions on the essentials of organization, financing, management, and delivery of private and public health care. Three lecture hours a week for one semester. Only one of the following may be counted: Health and Society 330, Public Health 358D, Sociology 358D. Prerequisite: The following coursework with a grade of at least C- in each: Public Health 354, and Statistics and Data Sciences 320E (or 328M).

PBH 361P. Public Health Internship.

Includes a public health research project off campus at a public health practice agency or a graduate school of public health. The equivalent of twelve lecture hours a week for one semester, with additional hours to be arranged. May be repeated once for credit. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Biology 325 or 325H and Statistics and Data Sciences 328M with a grade of at least C- in

each; and completion and approval of an internship application, available online at the Public Health website.

PBH 362. Epidemiology II: Quantitative Methods.

Introduction to advanced applied statistical and analytical techniques used for public health research and practice. Examine both continuous and categorical data often used in public health research and apply appropriate data analysis techniques for purposes of data collection, analysis, and evaluation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and the following coursework with a grade of at least C- in each: Public Health 354, and Statistics and Data Sciences 320E or 320H (or credit for Statistics and Data Science 328M).

PBH 363. Project Management, Planning, and Evaluation.

Investigate the importance of and the key approaches used to lead, conduct and evaluate effective public health programs. Examine practical management and program evaluation tools and techniques such budgeting, proposal/application development and use of logic models. Apply these concepts and tools within the context of service delivery and policy making in the field of public health. Recommended for students who are interested in the Certified Associate in Project Management (CAPM) exam from the Project Management Institute. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and the following coursework with a grade of at least C- in each: Public Health 354 and Statistics and Data Sciences 320E or 320H (or credit for Statistics and Data Science 328M).

PBH 364. Field Epidemiology.

Explore an overview and basic principles of field epidemiology including initiating operations, collecting and managing data, analyzing and interpreting data, developing interventions, and communicating during investigations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and the following coursework with a grade of at least C- in each: Public Health 354 and Statistics and Data Sciences 320E or 320H (or credit for Statistics and Data Science 328M).

PBH 365. Public Health Informatics.

Examine fundamental concepts in the application of informatics and information technology to the practice of public health. Investigate how interoperable information systems are used to facilitate a variety of public health functions, including outbreak management, bio-surveillance, disease prevention, and electronic laboratory reporting. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and the following coursework with a grade of at least C- in each: Public Health 354 and Statistics and Data Sciences 320E or 320H (or credit for Statistics and Data Science 328M).

PBH 366. Global Health in Action.

Restricted to Public Health majors. Interact with non-profit organizations to improve social determinants of health in communities globally. Participate in activities including needs assessments; Internal Review Board (IRB) applications; data collection, management, analysis, and visualization; report preparation; and resource identification as well as gain cultural understanding of the community. Three lecture hours a week for one semester. Public Health 337 (Topic: Global Health in Action) and 366 may not both be counted. Prerequisite: Upper-division standing and the following coursework with a grade of at least C- in each: Public Health 354 and Statistics and Data Sciences 320E or 320H (or Statistics and Data Science 328M).

PBH 367. Emerging and Re-emerging Infectious Diseases.

Explore, research, and present emerging and re-emerging infectious diseases, including factors in disease emergence, animal reservoirs, and the principles that govern the detection, mitigation and control of pandemic disease. Study a detailed analysis of host-pathogen

interactions, illuminating how viral and bacterial pathogens defeat the host's immune defenses and cause disease. Examine representative emerging and re-emerging pathogens, case-based outbreak investigations, and individual case studies. Three lecture hours a week for one semester. Public Health 337 (Topic: Emerg/Re-emerg Infect Diseases) and 367 may not both be counted. Prerequisite: PBH 354 and BIO 326M or BIO 326R, or consent of instructor.

PBH 379H. Honors Tutorial Course.

Supervised individual research on a special topic in public health, leading to an honors thesis and an oral presentation. May be based on laboratory, library, or field research. Three lecture hours a week for one semester. May be repeated once for credit. May be repeated for credit. Prerequisite: Upper-division standing; a university grade point average of at least 3.0; admission to the public health honors program; and consent of the honors adviser.

Graduate Courses

Professional Courses