

PUBH A208: INVESTIGATING DISEASE OUTBREAKS AND EPIDEMICS

Item	Value
Curriculum Committee Approval Date	02/26/2025
Top Code	083700 - Health Education
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)

Course Description

This introductory course examines the social, cultural, political, and historical impact of epidemics and disease outbreaks. It will include the applications of epidemiology to public health practice and our society, and the study of the ethical and social context of epidemiology through great works of literature and selected historical narratives. ADVISORY: English, one level below transfer (ie, eligibility for English composition (CID ENGL 100) and reading a course with an exiting skill of ability to read a college level text. Transfer Credit: CSU; UC. C-ID: PH108. C-ID: PH108.

Course Level Student Learning Outcome(s)

1. Apply basic epidemiological methods and calculations to describe a public health problem.
2. Analyze the ethical issues surrounding epidemiology practice.
3. Describe how epidemiology can be used to achieve social justice.

Course Objectives

- 1. Critically evaluate the role and relevance of epidemiology as a tool to address public health problems.
- 2. Describe the historical and social context of epidemiology through literature and film.
- 3. Identify the most commonly used epidemiological study designs through conceptual and narrative processes.
- 4. Demonstrate the use of basic epidemiological methods, such as the analysis of rates, and the definition of cases, population at risk, risk factors, incidence, prevalence, natality, morbidity, and mortality.
- 5. Apply basic epidemiological calculations to describe a public health problem.
- 6. Interpret epidemiological data, including identifying threats to internal and external validity of studies.
- 7. Outline the steps in an outbreak investigation, detection, and control of infectious conditions and chronic disease.
- 8. Apply population perspectives in various health professions.
- 9. Critique the ethical issues surrounding epidemiology practice.

- 10. Apply the skills to provide effective, necessary, and appropriate health services and public health interventions in diverse and multicultural communities identified by epidemiological data.
- 11. Describe the challenges to achieving social justice and identify ways to contribute to social justice within local communities, nations, and/or the world.

Lecture Content

Epidemiology Role and relevance of as a tool to address public health problems Historical and social context Newspapers Literature Film Commonly used epidemiological study designs Case studies Basic epidemiological calculations and analysis of rates Cases Population at risk Risk factors, including the social determinants of health Incidence Prevalence Natality Morbidity Mortality Overview of Epidemiologic Study Designs Experimental Studies Cohort Studies Case-Control Studies Basic epidemiological measurements Interpretation Identification Threats to the validity of studies Sources of Public Health Data Steps in an outbreak investigation Detection Patterns and Population Perspectives Association and causality Control of infectious conditions and chronic disease Ethical Issues and Research Involving Human Participants Landmark studies Policies Belmont Report IRB Informed Consent Health services and public health interventions Diverse and multicultural communities Social justice Within local communities Within nations Within the world

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

Lecture, discussion, in-class activities and online computer tutorials

Reading Assignments

Students will read the textbook chapters and instructor-provided supplements. (2 hours a week)

Writing Assignments

Students will respond to instructor-provided prompts in short assignments. They will also complete essay responses on quizzes. They will respond to ethical situations in epidemiology. (2 hours a week)

Out-of-class Assignments

Students will complete practice problem sets requiring the application of course material. Preparation assignments that require students to answer specific questions that will be discussed in an upcoming class meeting (3 hours a week)

Demonstration of Critical Thinking

Students will analyze different approaches to epidemiology and disease outbreak surveillance.

Required Writing, Problem Solving, Skills Demonstration

Students will complete problems on quizzes and respond to essay questions.

Eligible Disciplines

Health: Master's degree in health science, health education, biology, nursing, physical education, kinesiology, exercise science, dietetics, or nutrition OR bachelor's degree in any of the above AND master's degree in public health, or any biological science OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Aschengrau, A. Seage, G.. Essentials of Epidemiology in Public Health, ed. Jones and Bartlet Publishing, 2020 2. Required Merrill, R.. Introduction to Epidemiology, 8 ed. Jones and Bartlet Publishing, 2021