This course presents selected information, concepts, and methods from the field of epidemiology with emphasis on the methods by which risk factors are identified and evaluated as potential causes of health-related events. It is geared toward providing students a basic understanding of epidemiology and its role as the foundation for public health.

**Course Objectives**

By the end of the course, you will be able to:

- Discuss and explain the definition of epidemiology and its historical foundations
- Identify sources of epidemiologic data and their respective strengths and limitations
- Define and manipulate the basic statistical concepts of rates, ratios, and odds
- Define and calculate prevalence, incidence, ratio, measures of association, and selected other common calculations
- Define epidemiologic study designs—ecologic (correlational), cross-sectional, cohort, case-control, and experimental (intervention) studies—and compare their strengths and weaknesses
- Define and discuss types of error, the types of bias, and methods of bias control
- Define what is meant by the unit of analysis and recognize the appropriate unit of analysis to evaluate a given public health issue

**Book**