



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman
College of Public Health

**Mel and Enid Zuckerman College of Public Health
University of Arizona**

EPID 660 Infectious Disease Epidemiology

Catalog Description: Introduction to epidemiologic methods used in infectious disease investigations. An emphasis will be placed on understanding the relationships between the host, the parasite and the environment as they relate disease causation. (3 units)

Course Topics:

- Outbreak Investigations
- Immunity and Vaccine Preventable Diseases
- Study Design in Infectious Disease Epidemiology
- Infectious Disease Surveillance
- Vector-borne Disease
- Respiratory Transmission
- Hospital Acquired Infections
- Sexually Transmitted Infections
- Fecal-Oral Transmission
- Infectious Disease Modeling

Course Objectives: During this course, students will:

- Compare appropriateness of study designs to answer specific questions in infectious disease epidemiology.
- Evaluate different strategies for infectious disease surveillance.
- Distinguish among basic modes of transmission.
- Synthesize literature on a self-selected topic in infectious disease epidemiology.
- Communicate ideas about strengths and weaknesses of epidemiological study designs.
- Critique infectious disease epidemiology studies.
- Connect changing infectious disease epidemiology with significant global changes.

Learning Outcomes (Competencies Obtained): Upon completion of this course students will be able to:

1. Search, describe and summarize findings from the scientific literature to describe the epidemiology of a public health problem, identify health disparities and identify risk factors
2. Compare the relative strengths and weaknesses of epidemiological study designs, and choose the most appropriate design for specific research questions
3. Interpret these epidemiological analyses in the context of published literature and communicate key findings to various audiences
4. Select appropriate study design for assessing the association between a given exposure and an outcome, and then understanding advantages and limitations of these approaches
5. Critique and synthesize appropriate literature and research findings to address a research question
6. Identify potential sources of bias for various study designs and their impact on study quality
7. Describe public health surveillance systems and their underlying data sources
8. Organize and deliver clear presentations of research findings in varying professional formats to diverse audiences
9. Develop research questions to address health problems by appraising and identifying gaps in the

current scientific literature

10. Lead group interactions competently, ethically, respectfully and professionally to diverse audiences
11. Organize and deliver clear presentations of research findings in varying professional formats to diverse audiences