



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman College of Public Health

Mel and Enid Zuckerman College of Public Health University of Arizona

EHS 575 Environmental and Occupational Health

Catalog Description: Course emphasizes health hazard sources, methods to identify & evaluate them, and framework used to effect hazard control. Students will evaluate public health issues, understand research designs, identify and evaluate factors important to the development of monitoring programs. (3 units)

Course Topics:

- Ethics and Public Health
- Toxicology
- Water Quality
- Recreational Water, Soils and Emerging Infections
- Risk Assessment
- Legionella
- Occupational and Environmental Health
- Environmental Contaminants
- Virus, Vectors and Disease
- Preparedness
- Energy, Transportation and Urbanization
- Ambient and Indoor Air Quality
- Climate Change, Population Pressure and Sustainability
- Food Safety

Course Objectives: During this course, students will:

- Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.
- Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
- Specify current environmental risk assessment methods.
- Describe genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.
- Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.
- Explain the general mechanisms of toxicity following various environmental exposures.
- Develop a testable model of environmental insult.
- Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues.

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

1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Interpret results of data analysis for public health research, policy or practice
4. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
5. Explain basic principles and tools of budget and resource management

6. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
7. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
8. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
9. Describe the importance of cultural competence in communicating public health content
10. Apply systems thinking tools to a public health issue
11. Identify control methods for reducing worker or public exposures to acceptable levels
12. Describe factors which influence the behavior of aerosols and their ultimate fate including deposition in the respiratory system