

Environmental and Occupational Health Concentration Competencies

- A. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents
- B. Describe genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards
- C. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues
- D. Specify current environmental risk assessment methods
- E. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety
- F. Explain the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures
- G. Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity
- H. Develop a testable model of environmental insult
- I. Specify the role of the immune system in population health.
- J. Describe how behavior alters human biology.
- K. Identify the ethical, social and legal issues implied by public health biology.
- L. Explain the biological and molecular basis of public health.
- M. Explain the role of biology in the ecological model of population-based health.

- N. Explain how genetics and genomics affect assessment of disease processes and public health policy and practice.
- O. Articulate how biological, chemical and physical agents affect human health.
- P. Apply biological principles to development and implementation of disease prevention, control, or management programs.
- Q. Apply evidence-based biological and molecular concepts to inform public health laws, policies, and regulations.
- R. Integrate general biological and molecular concepts into public health.
- S. Ethical/Legal Treatment of Human Subjects
- Apply principles of good ethical/legal practice as they relate to study design and data collection, dissemination, use, and all aspects of data handling
 - Be familiar with the Institutional Review Board (IRB) research requirements and processes
- T. Cultural Competency
- Design and conduct research studies in a manner that is respectful to individuals from different cultural and social backgrounds