Environmental Public Health Concentration Competencies

Students concentrating in the MPH environmental public health concentration will achieve the below listed student learning outcomes.

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

Epidemiology Concentration Competencies

Students concentrating in the MPH epidemiology concentration will achieve the below listed student learning outcomes.

1. Identify and use appropriate sources of epidemiologic data.
2. Demonstrate functional understanding of public health screening programs.
3. Define public health problems in terms of magnitude, people, time, and place.
4. Articulate in writing and verbally the scientific, ethical, economic, and political implications of epidemiology as it relates to public health issues.
5. Describe basic ethical, moral and legal principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.
6. Apply both basic and advanced terminology and definitions of epidemiology.
7. Calculate basic and advanced epidemiology measures of effect.
8. Demonstrate the ability to effectively communicate epidemiologic information to lay and professional audiences.
9. Demonstrate the ability to describe appropriate inferences from epidemiologic data.
10. Articulate the strengths and limitations of epidemiologic reports.
11. Demonstrate functional understanding of the development of community partnerships.
12. Demonstrate skills necessary to assist in preparing proposals for external funding.

**Health Education Concentration Competencies:**

Students concentrating in the MPH health education concentration will achieve the below listed student learning outcomes.

1. Assess individual and community needs for health education.
2. Plan health education strategies, interventions and programs.
3. Implement health education strategies, interventions and programs.
4. Conduct evaluation and research related to health education.
5. Administer health education strategies, interventions and programs.
7. Communicate and advocate for health and health education.

**Health Service Management Concentration Competencies**

Students concentrating in the MPH health services management concentration will achieve the below listed student learning outcomes.

1. Demonstrate the ability to incorporate systems thinking into public health practice.
2. Articulate ethical standards of practice as a means by which to engage organizations and communities.
3. Identify strategies to address internal and external problems that impact the delivery and assurance of essential public health services.
4. Define and demonstrate effective leadership behaviors and practices.
5. Demonstrate a clear understanding of population-health management and associated strategies toward the maximization of the health of the public.
6. Apply strategic thinking skills in the areas of administration, personnel, ethics, and finance related to public health and policy.
7. Demonstrate an understanding of global health issues, including vulnerable populations, disease and the political and legal implications of health on a global scale.
8. Develop and defend a plan to implement a public health-related policy.
9. Describe the importance of cultural competency as related to the ethical practice of public health.
10. Demonstrate an understanding of public health systems and services research.

**Occupational Public Health Concentration Competencies**

Students concentrating in the MPH occupational public health concentration will achieve the below listed student learning outcomes.

1. Define strategies for related to prevention and treatment of occupational injury and disease and the minimization of disability.
2. Define and implement strategies to improve workplace safety.
3. Define how ergonomics principles can be implemented in jobsites to prevent disease and improve productivity.
4. Demonstrate how risk reduction, hazard control and risk communication can be implemented within workplace and public health settings.
5. Demonstrate an understanding of occupational health management and administration.
6. Demonstrate an understanding of the primary tenants of industrial hygiene methods in practice-based settings.
7. Exhibit the ability to work as part of an interdisciplinary public health/healthcare team.
8. Articulate and demonstrate an understanding of the environmental determinants of disease including: occupationally acquired illnesses and disease.

**Biostatistics Concentration Competencies**

Students concentrating in the MPH biostatistics concentration will achieve the below listed student learning outcomes.

1. Describe the roles biostatistics serves in the discipline of public health.
2. Describe basic concepts of probability, random variation and commonly used statistical probability distributions.
3. Describe preferred methodological alternatives to commonly used statistical methods when assumptions are not met.
4. Distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions.
5. Apply descriptive techniques commonly used to summarize public health data.
7. Apply descriptive and inferential methodologies according to the type of study design for answering a particular research question.
8. Apply basic informatics techniques with vital statistics and public health records in the description of public health characteristics and in public health research and evaluation.
9. Interpret results of statistical analyses found in public health studies.
10. Develop written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences.