

MPH

The MPH program core competencies are based on the ASPPH competencies for each of the core areas of public health. There are additional cross-cutting competencies that all MPH students attain during their course of study.

Biostatistics

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.
6. Apply common statistical methods for inference.
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.

Environmental Health Sciences

1. Describe the direct and indirect human, ecological, and safety effects of major environmental and occupational agents.
2. Describe the general mechanisms of toxicity associated with the absorption, distribution, metabolism and excretion of xenobiotics.
3. Describe factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.
4. Describe regulatory programs, guidelines, and authorities that seek to control environmental health issues.
5. Describe environmental risk assessment methods and strategies for effectively communicating risks to the public.
6. Describe interventions and control approaches for assessing, preventing and controlling environmental hazards that impact human health and safety.
7. Identify cases where environmental justice and equity issues arose and what forms of injustice were operative.
8. Describe an environmental health problem and how an environmental health practitioner can systematically and holistically address it.

Epidemiology

1. Identify key sources of data for epidemiologic purposes.
2. Identify the principles and limitations of public health screening programs.
3. Describe a public health problem in terms of magnitude, person, time, and place.
4. Explain the importance of epidemiology for informing scientific, ethical, economic, and political discussion of health issues.
5. Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.
6. Apply the basic terminology and definitions of epidemiology.
7. Calculate basic epidemiology measures.
8. Communicate epidemiologic information to lay and professional audiences.

9. Draw appropriate inferences from epidemiologic data.
10. Evaluate the strengths and limitations of epidemiologic reports.

Health Policy and Management (Health Management and Policy)

1. Identify the main components and issues of the organization, financing, and delivery of health services and public health systems in the US.
2. Describe the legal and ethical bases for public health and health services.
3. Discuss the policy process for improving the health status of populations.
4. Apply quality and performance improvement concepts to address organizational performance issues.
5. Apply "systems thinking" for resolving organizational problems.
6. Communicate health policy and management issues using appropriate channels and technologies.

Social and Behavioral Sciences (Community and Behavioral Health)

1. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice.
2. Identify the causes of social and behavioral factors that affect health of individuals and populations.
3. Describe steps and procedures for the planning, implementation, and evaluation of public health programs, policies, and interventions.
4. Describe the role of social and community factors in both the onset and solution of public health problems.
5. Describe the merits of social and behavioral science interventions and policies.
6. Apply evidence-based approaches in the development and evaluation of social and behavioral science interventions.
7. Apply ethical principles to public health program planning, implementation, and evaluation.
8. Specify multiple targets and levels of intervention for social and behavioral science programs and/or policies.

Professionalism

1. Discuss sentinel events in the history and development of the public health profession and their relevance for practice in the field.
2. Apply the core functions of assessment, policy development, and assurance in the analysis of public health problems and their solutions.

Program Planning

1. Describe how social, behavioral, environmental, and biological factors contribute to specific and community health outcomes.

Systems Thinking

1. Explain how systems (e.g., individuals, social networks, organizations, communities) may be viewed as systems within systems in the analysis of public health problems.
2. Analyze the effectiveness of political, social and economic policies on public health systems at the local, state, national and international levels.
3. Assess strengths and weaknesses of applying the systems approach to a public health problem.

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