

MPH Core Competencies and Learning Experiences

Graduates of the MPH degree program are expected to be grounded in the following Foundational Public Health knowledge:

Evidence-based Approaches to Public Health

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. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice

Public Health & Health Care Systems

5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Planning & Management to Promote Health

7. Assess population needs, assets and capacities that affect communities' health
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9. Design a population-based policy, program, project or intervention
10. Explain basic principles and tools of budget and resource management
11. Select methods to evaluate public health programs

Policy in Public Health

12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity

Leadership

16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
17. Apply negotiation and mediation skills to address organizational or community challenges

Communication

18. Select communication strategies for different audiences and sectors
19. Communicate audience-appropriate public health content, both in writing and through oral presentation
20. Describe the importance of cultural competence in communicating public health content

Interprofessional Practice

21. Perform effectively on interprofessional teams

Systems Thinking

22. Apply systems thinking tools to a public health issue

Program Concentration Competencies

Each concentration offers a unique curriculum of courses designed to assure that students gain the skills necessary to become competent practitioners.

Biostatistics Competencies*

1. Apply standard probability distributions to public health outcomes Apply and interpret common statistical descriptive and inferential methods, including confidence intervals and hypothesis tests in one-sample, two-sample, and multivariable regression settings
2. Apply and interpret common statistical descriptive and inferential methods, including confidence intervals and hypothesis tests in one-sample, two-sample, and multivariable regression settings
3. Conduct predictive modeling, for example in order to relate risk factors to an outcome
4. Build and interpret appropriate multivariate regression models to analyze public health data
5. Develop practical skills in using statistical software packages for data management and analysis of public health data
6. Develop written reports based on statistical analyses

Environmental Health Competencies*

1. Examine the direct and indirect human and ecological health effects of major environmental agents
2. Develop a quantitative risk assessment framework for environmental hazards
3. Apply knowledge of environmental legislation to case studies to determine jurisdiction and approach
4. Apply approaches for assessing environmental exposures, including exposure assessment design and methods
5. Demonstrate cultural sensitivity and appropriate communication when engaged in public health practice and research

Epidemiology Competencies*

1. Assess potential confounders in epidemiology studies.
2. Evaluate interaction, effect modification and mediation in epidemiology studies.
3. Evaluate the multifactorial etiology and pathophysiology of chronic diseases
4. Apply criteria for identification, prevention and control of infectious agents.
5. Manage, analyze and interpret large-scale epidemiologic data

Population Health Management*

1. Integrate systems thinking theory to incorporate multiple stakeholders at state and local levels to address a public health issue
2. Create an evaluation plan for a public health initiative
3. Apply principles and theory of budget preparation, managerial accounting and financial management to organizations in the health sector
4. Develop a survey instrument that validly examines public health research questions and produces data that addresses health implications and their relationship to policy and contexts
5. Conduct an economic analysis of a major health policy issue

Social and Behavioral Sciences*

1. Evaluate public health social and behavioral science research so that research decisions, strengths and limitations are addressed
2. Integrate social and behavioral science theories and concepts in the development of interventions/solutions to public health problems.
3. Design and conduct a community needs assessment.
4. Design, implement and evaluate a public health intervention
5. Design and develop effective communication products that convey health information to diverse audiences that increase recipients' knowledge and positively impact attitudes, beliefs and behaviors.

*Public Health Practice students may have a blend of the five concentrations above.