| MPH CURRICULUM & COURSE MATRIX BY PROGRAM COMPETENCIES, LEARNING OBJECTIVES, & ASSESSMENT METHODS | STUDENT LEARNING EXPERIENCES |
|---|---|---|---|---|---|---|---|---|---|
| **CORE COURSES** | **HISPANIC & BORDER HEALTH CONCENTRATION COURSES** | **PRACTICE EXPERIENCE** | **CULMINATING EXPERIENCE** | **PUBLIC HEALTH ELECTIVES** |
| PUBH 5305* | PUBH 5302* | PUBH 5304* | PUBH 5307* | PUBH 5302* | PUBH 5352* | PUBH 5353* | PUBH 5662* | PUBH 5357 | PUBH 5358 |
| **BIOSTATISTICS CORE COMPETENCIES** | | | | | | | | | |
| 1. Describe the roles biostatistics serves in the discipline of public health. | P | | | | X | X | X | X |
| 2. Describe basic concepts of probability, random variation and commonly used statistical probability distributions. | P | | | | X | X | X | X |
| 3. Describe preferred methodological alternatives to commonly used statistical methods when assumptions are not met. | P | | | | X | X | X | X |
| 4. Distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions. | P | | | | X | X | X | X |
| 5. Apply descriptive techniques commonly used to summarize public health data. | P | R | R | R | R | X | X | |
| 6. Apply common statistical methods for inference. | P | R | | | | X | X | X |
| 7. Apply descriptive and inferential methodologies according to the type of study design for answering a particular research question. | P | R | | | | X | X | X |
| 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. | P | R | | R | R | X | X | |
| 9. Interpret results of statistical analyses found in public health studies. | P | R | R | R | R | R | R | X | X |
| 10. Develop written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences. | P | | R | | X | X | X | |
| **EPIDEMIOLOGY CORE COMPETENCIES** | | | | | | | | | |
| 1. Identify key sources of data for epidemiologic purposes. | R | P | | | R | X | X | |
| 2. Identify the principles and limitations of public health screening programs. | R | P | | | X | X | X | |
| 3. Describe a public health problem in terms of magnitude, person, time and place. | P | | | | X | X | X | |
| 4. Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues. | P | | | | X | X | X | |
5. Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data. | P | X | X | X |
6. Apply the basic terminology and definitions of epidemiology. | P | X | X | X |
7. Calculate basic epidemiology measures. | R | P | X | X | X |
8. Communicate epidemiologic information to lay and professional audiences. | P | R | R | R | X | X | X |
9. Draw appropriate inferences from epidemiologic data. | P | R | R | R | R | X | X | X |
10. Evaluate the strengths and limitations of epidemiologic reports. | P | X | X | X |

**ENVIRONMENTAL HEALTH CORE COMPETENCIES**

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

**SOCIAL & BEHAVIORAL SCIENCE CORE COMPETENCIES**

1. Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice. | P | X | X | X |
2. Identify the causes of social and behavioral factors that affect health of individuals and populations. | P | R | X | X | X |
3. Identify individual, organizational and community concerns, assets, resources and deficits for social and behavioral science interventions. | P | X | X | X |
4. Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions. | P | R | X | X | X |
5. Describe steps and procedures for the planning, implementation and evaluation of public health programs, policies and interventions. | P | R | R | R | X | X |
6. Describe the role of social and community factors in both the onset and solution of public health problems. | P | R | X | X | X |
7. Describe the merits of social and behavioral science interventions and policies. | P | X | X | X |
8. Apply evidence-based approaches in the development and evaluation of social and behavioral science interventions.  

9. Apply ethical principles to public health program planning, implementation and evaluation.  

10. Specify multiple targets and levels of intervention for social and behavioral science programs and/or policies.  

### HEALTH POLICY & MANAGEMENT CORE COMPETENCIES

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. Explain methods of ensuring community health safety and preparedness.  

4. Discuss the policy process for improving the health status of populations.  

5. Apply the principles of program planning, development, budgeting, management and evaluation in organizational and community initiatives.  

6. Apply principles of strategic planning and marketing to public health.  

7. Apply quality and performance improvement concepts to address organizational performance issues.  

8. Apply "systems thinking" for resolving organizational problems.  

9. Communicate health policy and management issues using appropriate channels and technologies.  

10. Demonstrate leadership skills for building partnerships.  

### HISPANIC & BORDER HEALTH CONCENTRATION COMPETENCIES

1. Describe the historical, cultural, social, economic, political and other similarities and differences among Hispanic and border groups and how these affect health equity and health disparities.  

2. Describe the roles of history, power, privilege, economics and other structural inequalities that restrict health equity and produce health disparities in Hispanic and border communities.  

3. Identify the major chronic, infectious, and other public health challenges that face Hispanic and border communities.  

4. Apply the basic principles of prevention and control for chronic, infectious, and other conditions especially those that differentially impact Hispanic and border communities.  

5. Identify and access the major sources of public health data that pertain to Hispanic and border communities (e.g., vital statistics and disease registries, health and nutrition surveillance databases, census data, national surveys).  

6. Develop public health strategies and interventions that are responsive to the unique needs and cultural values/traditions of Hispanic and border communities.  

7. Recognize and apply the social justice perspective in public health practice as it relates to community capacity building and empowerment.  

8. Know how to plan, implement, administer, and evaluate public health programs to Hispanic and border communities.
9. Effectively communicate information to the public and policy makers regarding the special public health challenges and needs of Hispanic and border communities.

10. Act as an effective resource person for Hispanic and border residents, organizations, and communities.

COURSES
- PUBH 5305. Biostatistics in Public Health
- PUBH 5302. Epidemiology for Public Health Professionals
- PUBH 5304. Environmental Health
- PUBH 5307. Health Services Administration & Policy
- PUBH 5353. Social & Behavioral Approaches to Public Health
- PUBH 5352. Public Health Evaluation & Research
- PUBH 5321. Responding to Chronic & Infectious Diseases in Hispanic & Border Communities
- PUBH 5322. Eliminating Health Disparities
- PUBH 5662. Practicum in Public Health
- PUBH 5398. Thesis I
- PUBH 5399. Thesis II
- PUBH 5397. Graduate Research Project
- PUBH 5357. Special Topics in Public Health
- PUBH 5358. Independent Study in Public Health

NOTES:
* The learning objectives in this course contribute to achievement of the competency (see individual syllabi for learning objectives and learning assessment methods)

P. Competency primarily gained in this course
R. Competency reinforced in this course
X. Courses have clear learning objectives but content varies by topic; one or more competencies are addressed in these courses.