**BS & MPH - Public Health Course Competencies**

**Biostatistics**
- Describe the role of using statistics in the discipline of public health.
- Apply basic statistical methods for summarizing data.
- **Interpret statistical results from published public health data.**
  - Apply statistical knowledge to interpreting data found in published articles.
  - Apply basic statistical techniques with vital statistics and public health records in the description of public health characteristics and in public health program, planning and evaluation.
  - Develop written and oral presentations based on statistical analyses for both public health professionals and lay audiences.
  - Recognize statistical concepts, including probability, confidence intervals and hypothesis testing.

**Diversity and Cultural Proficiency**
- Recognize value and integrate diverse individuals, groups and communities in order to produce public health outcomes.
  - Describe the roles of history, power, privilege and structural inequality in producing health disparities.
  - Explain how professional ethics and practices relate to equity and accountability in diverse community settings.
  - Explain why cultural competence alone cannot address health disparity.
  - Use the basic concepts and skills involved in culturally appropriate community engagement and empowerment with diverse communities.
  - Differentiate among availability, acceptability, and accessibility of health care across diverse populations.
  - Differentiate among linguistic competence, cultural competency, and health literacy in public health practice.
  - Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention.
  - Develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served.
**ENVIRONMENTAL HEALTH SCIENCES**

- Describe environmental health hazards and their potential effects on human health.
  - Describe local, regional and global impact of environmental hazards on human and ecological health.
  - Describe the role population growth has in impacting social and environmental systems.

- Discuss strategies for preventing or controlling environmental health hazards that pose risk to human health.
  - Describe socioeconomic and behavior, as well as genetic and physiologic factors, that affect environmental exposure in communities.
  - Discuss issues of environmental justice, equity and health disparities.

**EPIDEMIOLOGY**

- Explain the role of Epidemiology as the basic science for Public Health by discussing uses and applications of epidemiology in Public Health.
  - Identify key sources of data for epidemiological purposes.
  - Describe a public health problem in terms of magnitude, person, time and place.
  - Apply the basic terminology and definitions of epidemiology.
  - Calculate basic epidemiology measures.
  - Communicate epidemiologic information through writing and presentation.
  - Draw appropriate inferences from epidemiologic data including the strengths and weaknesses of the data.
  - Describe how epidemiologic data inform public health planners to distribute resources and plan and implement interventions.

**PROGRAM PLANNING AND ASSESSMENT**

- Plan for the design, development, implementation and evaluation of strategies to improve individual and community health.
  - Develop a plan to address a public health problem.
  - Describe how social, behavioral, environmental and biological factors contribute to specific individual and community outcomes.
  - Describe the tasks necessary to assure that program implementation occurs as intended.
  - Use planning models effectively to design community based interventions.
  - Develop and write goals, measureable objectives, related activities and expected outcomes for a public health program.
  - Prepare a program budget and written justification.
  - Design an evaluation plan for a public health program.
  - Differentiate the purposed and application of formative, process, impact and outcome evaluation.
  - Develop measurement tools that reflect a program’s activities and intended goals.
  - Design an effective program marketing strategy utilizing social marketing and socio-behavioral concepts.
SYSTEMS THINKING

- Recognize the local, state, and federal public health systems and how they interact.
  - Identify the systems for medical care provision in the US.
  - Identify the role of non profits in the public health system.
  - Explain how the contexts of gender, race, poverty, history, and culture are important in the design of interventions within public health systems.
  - Understand the impact of global trends and interdependencies on public health related problems and systems.

EDM Public Health Course Competencies

Analytic/Assessment Skills

- Assesses the health status of populations and their related determinants of health and illness.
- Describes the characteristics of a population-based health problem
- Selects variables that measure public health conditions
- Uses methods and instruments for collecting valid and reliable quantitative and qualitative data
- References sources of public health data and information
- Evaluates the integrity and comparability of data
- Identifies gaps in data sources
- Interprets quantitative and qualitative data
- Makes community-specific inferences from quantitative and qualitative data
- Utilizes data to address scientific, political, ethical, and social public health issues

Policy Development/Program Planning Skills

- Analyzes information relevant to specific public health policy issues
- Articulates policy options
- Determines the feasibility and expected outcomes of policy options
- Articulates the implications of policy options
- Incorporates policy into organizational plans, structures, and program
- Develops mechanisms to monitor and evaluate programs for their effectiveness and quality
- Develops strategies for continuous quality improvement
Communication Skills
- Assesses the health literacy of populations served
- Communicates in writing and orally, in person, and through electronic means, with linguistic and cultural proficiency
- Presents demographic, statistical, programmatic, and scientific information for use by professional and lay audiences
- Applies communication strategies in interactions with individuals and groups

Cultural Competency Skills
- Incorporates strategies for interacting with persons from diverse backgrounds
- Considers the role of cultural, social, and behavioral factors in the accessibility, availability, acceptability and delivery of public health services
- Responds to diverse needs that are the result of cultural differences
- Explains the dynamic forces that contribute to cultural diversity
- Describes the need for a diverse public health workforce
- Assesses the public health organization for its cultural competence

Public Health Sciences Skills
- Describes the scientific foundation of the field of public health
- Identifies prominent events in the history of the public health profession
- Relates public health science skills to the Core Public Health Functions and Ten Essential Services of Public Health
- Applies the basic public health sciences (including, but not limited to biostatistics, epidemiology, environmental health sciences, health services administration, and social and behavioral health sciences) to public health policies and programs
- Retrieves scientific evidence from a variety of text and electronic sources
- Determines the limitations of research findings
- Determines the laws, regulations, policies and procedures for the ethical conduct of research

Financial Planning and Management Skills
- Interprets the interrelationships of local, state, and federal public health and health care systems for public health program management
- Interprets the organizational structures, functions, and authorities of local, state, and federal public health agencies for public health program management
- Applies basic human relations skills to the management of organizations, motivation of personnel, and resolution of conflicts
Leadership and Systems Thinking Skills

- Incorporates ethical standards of practice as the basis of all interactions with organizations, communities, and individuals
- Identifies internal and external problems that may affect the delivery of essential public health services
- Promotes individual, team and organizational learning opportunities

EDM Public Health Course Competencies

Program Goals:

The Masters of Science in Epidemiology Program at Temple University trains individuals to investigate the causes of disease occurrence in human populations, including the assessment of individual factors and characteristics of their physical and social environment. These findings can guide policy makers in developing programs and initiatives to improve the public’s health. Students will learn and participate in epidemiology first hand from faculty members who are actively engaged in the practice of epidemiologic research and addressing public health problems and priorities.

Core public health competencies include:

- Complete, in-depth understanding of the types of epidemiologic study designs, the pros and cons of each, and the role/limitations of survey data
- Competency in biostatistical methods applied to population-based and survey data
- Critical evaluation of research studies and results
- Demonstrate knowledge in data management and statistical analysis
- Recognize ethic considerations in population-based research
- Develop, design, analyze and defend a student-initiated research protocol
- Communicate research results orally and in writing
PhD Public Health Course Competencies

- Competency 1: **Breadth** of knowledge about the history and fundamental principles and methods of **core areas** of public health practice, research, and theory.

- Competency 2: Knowledge of and adherence to the **ethical principles** associated with public health research and practice.

- Competency 3: Ability to synthesize, critically evaluate and generate original **research** relevant to an area of interest in public health (i.e., health policy, social and behavioral health sciences).

- Competency 4: Ability to organize, interpret and effectively **communicate** public health concepts and research findings orally and in writing.

- Competency 5: **In-depth** knowledge about the fundamental principles and methods of a **specific area** of public health practice, research, and theory (i.e., health policy, social and behavioral sciences). Competencies in this section are divided into the two concentrations – 5.1. Social & Behavioral Health Sciences (SBHS) and 5.2. Health Policy (HP).