COMPETENCIES FOR THE PH.D. IN PUBLIC HEALTH

BIOSTATISTICS
Upon receiving a Ph.D. in Public Health in the Department of Biostatistics, the student will be able to:

• Conduct independent research in the theory and/or application of biostatistics.
• Utilize critical thinking to select from a variety of analytical and computational tools to test statistical hypotheses, interpret results of statistical analyses, and use these results to make relevant inferences from data.
• Demonstrate teaching and presentation skills to effectively communicate biostatistics theory and applications across a wide range of complex biomedical or public health problems.

CHRONIC DISEASE EPIDEMIOLOGY
Upon receiving a Ph.D. in Public Health in the Department of Chronic Disease Epidemiology, the student will be able to:

• Discuss and critically evaluate epidemiologic reports and research articles.
• Teach content material for a course in the student’s broad discipline.
• Design and write an original research proposal in the student’s discipline.
• Apply at an advanced level the research methodology of the student’s specific research area.

ENVIRONMENTAL HEALTH SCIENCES
Upon receiving a Ph.D. in Public Health in the Department of Environmental Health Sciences, the student will be able to:

• Critique and evaluate the merit of environmental exposure methods.
• Form a hypothesis and synthesize testable aims to tackle an environmental health issue.
• Apply appropriate epidemiological design and statistical methods to analyze the link between environmental exposures and health impacts.

EPIDEMIOLOGY OF MICROBIAL DISEASES
Upon receiving a Ph.D. in Public Health in the Department of Epidemiology of Microbial Diseases, the student will be able to:

• Conduct quantitative analyses of epidemiological data.
• Apply the research methodology of the student’s broader discipline to a specific research project within the student’s area of interest.
• Formulate an epidemiologic research question that addresses a gap in the literature.

HEALTH POLICY AND MANAGEMENT
Upon receiving a Ph.D. in Public Health in the Department of Health Policy and Management, the student will be able to:

• Describe the health policy and management challenges that affect the delivery, quality, and costs of care for individuals and populations.
• Critically evaluate past and current research in health policy and management.
• Apply economic or political science theory and statistical methods to the analysis of relevant research questions in health policy and management.

SOCIAL AND BEHAVIORAL SCIENCES
Upon receiving a Ph.D. in Public Health in the Department of Social and Behavioral Sciences, the student will be able to:

• Describe how culture, social inequities, and biology influence health across the lifespan.
• Understand and conduct qualitative analyses that best answer research problems.
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