

# 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:

- Analyze 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:

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