

EPIDEMIOLOGY, PH.D.

The Doctor of Philosophy prepares students, through quality instruction, practical experiences and other research opportunities, for involvement in teaching and independent and collaborative epidemiological research; and trains researchers to teach and pursue original research for investigating health-related conditions. Students will develop a comprehensive knowledge of epidemiologic methods, applied biostatistics and at least one content area of epidemiology. Students will develop advanced skills in designing and conducting ethical population-based research, analyzing complex data, interpreting results of in-depth data analyses, effectively communicating results to scientific and lay audiences both orally and in writing, teaching, and grant writing.

Upon graduation, our students will have a solid foundation in epidemiologic research to improve health and be competitive for positions as postdoctoral fellows, principal investigators, instructors, and leading epidemiologists to be employed by organizations in academia, government (state or federal), private industry, or clinical settings.

A minimum of 30 credit hours must be unique to the University of South Carolina on the doctoral program of study, excluding 12 credits of dissertation preparation.

The following learning outcomes are premised upon having successfully met all the objectives previously that are common to the M.P.H. and M.S.* degrees.

Learning Outcomes

1. Students will demonstrate in-depth expertise in at least one substantive content area of epidemiology.
2. Students will formulate hypotheses of scientific significance, and design a study employing appropriate epidemiologic methods to address the hypotheses.
3. Students will apply knowledge of relevant mechanistic pathways (e.g., physiological, genetic, behavioral, and social) to advance understanding of disease etiology.
4. Students will critically appraise epidemiologic studies for internal and external validity and develop skills to synthesize published epidemiologic evidence.
5. Students will apply a broad range of advanced statistical approaches to analyze epidemiological data.
6. Students will apply the methods and principles of sound epidemiologic and ethical practice (including those related to data collection, processing, management, documentation, and security) in the design and conduct of epidemiologic research.
7. Students will demonstrate the ability to prepare a competitive research grant application in the format specified by relevant government agencies and/or private foundations.
8. Students will effectively communicate epidemiologic concepts methods results and implications to diverse audiences in oral and written formats.
9. Students will effectively teach epidemiologic concepts and methods.

*Note: The Master of Science in Public Health degree in epidemiology will undergo a name change. Effective Fall 2021, the new name for the degree program is Master of Science (M.S.). The curriculum remains the same.