

Programmatic Competencies for the PhD in Epidemiology

All of the competencies identified for the MS or MPH in Epidemiology, though in greater breadth and depth than expected for a Masters graduate, plus:

- Review the epidemiological literature and generate relevant research questions that contribute new knowledge to the field;
- Independently design and implement epidemiologic studies to answer specific research questions using a variety of designs, interpret study results and relate findings to the relevant scientific literature;
- Discuss potential biases that may affect epidemiologic studies and address them in the design and analysis of studies;
- Appreciate the practical limitations of epidemiologic research;
- Analyze epidemiologic data independently and in collaboration with a biostatistician, using appropriate statistical techniques;
- Develop and manage data collection procedures for new and existing data sources, including pre-coded questionnaires, as well as data abstraction forms;
- Independently develop and manage databases to facilitate both efficient data retrieval and analysis using a variety of software programs;
- Communicate epidemiologic findings orally and in writing in accordance with professional standards;
- Teach an introductory course in epidemiologic methods;
- Demonstrate substantive knowledge in a specialty area;
- Demonstrate knowledge of underlying ethical principles and obligations as they apply to the practice of epidemiology.