PH.D. IN EPIDEMIOLOGY

Overview

The Doctor of Philosophy (PhD) in Epidemiology is an intensive research-training program for students with prior training in Epidemiology or related disciplines. The program provides advanced education and training for students seeking a professional career in medical and health-related research, as well as for physicians and other persons who have attained professional degrees and are seeking to integrate epidemiological research and methods into their ongoing careers.

As a research-focused degree, students are given the skills necessary to approach health problems to generate consequential research questions and use the most appropriate epidemiological methods to address them. The methodologically rigorous training comprises both formal classroom education and guided research with faculty mentors. The PhD curriculum includes advanced coursework in epidemiological theory, analytical and statistical methods, study design and data interpretation, ethics in research and research experience. In addition to the core courses, students have the opportunity to complete elective coursework in epidemiology and other disciplines relevant to their selected area of emphasis. To advance to candidacy, students are required to pass a comprehensive examination at the conclusion of their second year of study (in epidemiology and biostatistics). The curriculum culminates in the development and completion of a dissertation generating new knowledge in the field of epidemiology based on independent research.

Admission Requirements

- All applicants for the PhD in Epidemiology program must submit the following items on SOPHAS (https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsophas.liaisoncas.com%2Fapplicant-ux%2F%23%2Fdeeplink%2FprogramSearch%2Forganization%2F1034082811816155136.&data=05%7C02%7CHRose%40med.miami.edu%7Ce388d33512f243609f3f08dc387a54f0%7C2a144b72f23942d48c0e6f0f17c48e33%7C0%7C0%7C638447345285281464%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=ofbijlyVHGXeLXtaQyG8ApMqFLBu%2B7sHelvIjJXaFi4%3D&reserved=0):
  - Application fee
  - Curriculum Vitae/Resume
  - Three letters of recommendation
  - Statement of Purpose/Personal Statement
  - Official transcripts from every post-secondary school attended
  - Graduate Record Exam (GRE)
- This graduate degree program also requires submission of certain supplemental materials, including:
  - TOEFL/IELTS score, as applicable
  - Foreign evaluation on international transcripts, as applicable

For more detailed information, please visit our Public Health Sciences Graduate Studies Admission Website (https://graduatestudies.publichealth.med.miami.edu/admissions/application-process/).·

For further information, please contact:

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Curriculum Requirements

Code	Title	Credit Hours
Core Courses		
BST 625	Survey of Statistical Computing	3
BST 630	Longitudinal and Multilevel Data	3
EPH 604	Clinical Trials	3
EPH 625	Ethics in Public Health	3
EPH 651	Research Methods	3
or EPH 752	Advanced Research Methods	
or EPH 772	Design Implementation of Epidemiologic Studies	
EPH 703	Advanced Statistical Methods I	4
EPH 705	Advanced Statistical Methods II	3

EPH 740	Basic Pathology and Patho-physiology	3
EPH 751	Survival Analysis in Clinical Trials	3
EPH 774	Epidemiologic Methods and Reasoning	3
EPH 776	Methods in Epidemiology	3
Professional Development Seminars [1]		**3**
EPH 700	PhD Professional Development Seminar (Course should be taken 3 times for 1 credit each)	
Electives		**15**
EPH-600, 700 level courses not already listed		
BST-600, 700 level courses not already listed		
Dissertation		**12**
EPH 830	Doctoral Dissertation	
EPH 840	Doctoral Dissertation- Post Candidacy	
Total Credit Hours		**64**

[1] *Students complete the Professional Development/Research Seminar multiple semesters (each Spring semester), minimum of three times; program director permission required for exception to minimum requirement.*

Plan of Study

Pre-requisites: The program is primarily designed for persons who have completed an MPH degree, as well as for physicians and others who have a master or doctoral degree in a related discipline. At a minimum, students should have successfully completed a graduate-level, foundation of epidemiology course as well as two graduate-level biostatistics courses.

All PhD in Epidemiology students are required to complete 64 credit hours. These include core courses in epidemiology and biostatistics, elective coursework and the dissertation. Students complete the structured coursework (core and elective courses) during their first two years of study and sit for comprehensive examinations during their second summer semester in the program. After successful completion of the comprehensive examinations, students advance to candidacy for the degree and complete their dissertation research.

Mission

The mission of the Graduate Programs in Public Health is to develop leaders who can generate and translate knowledge into policy and practice to promote health and prevent disease in human populations.

The PhD program in Epidemiology is an intensive research-training program for students with prior training in epidemiology or related disciplines. All PhD students in our program have extensive contact with faculty members, in part because the program is explicitly designed to be small and interactive. The program takes advantage of South Florida's unique opportunities for epidemiologic research, including our ever-changing mix of race, ethnicity, and cultures. In fact, many of our research programs could not be conducted elsewhere. Furthermore, because the program is located within the Miller School of Medicine, interactions with basic scientists and clinicians provide opportunities for epidemiologists to develop translational and interdisciplinary research.

Goals

Upon completion of the Doctorate in Epidemiology (PhD) degree, all graduates will be able to:

- Design epidemiologic studies applying sound methodology and assess the validity of results;
- Develop data collection/management methods and tools needed for performing epidemiology investigations;
- Apply quantitative and reasoning skills, as well as content-area knowledge to analyze data from epidemiological studies;
- Utilize the application of statistical methods that are critical to epidemiologic inquiry; manage and manipulate data sets in statistical analysis software packages including SAS and R;
- Identify major chronic and infectious diseases, their general pathophysiology, descriptive epidemiology and risk factors;
- Critically evaluate scientific literature and synthesize the outcomes across studies, balancing limitations and contributions of each study;
- Articulate research questions that advance scientific knowledge and develop a proposal for extramural research funding;
- Effectively communicate (written and oral) epidemiological concepts to students and peers;
- Conduct an advanced original research project and demonstrate mastery of the topic area;
- Read, plan, develop and present epidemiologic data outside their area of mastery;
- Conduct epidemiological research and be prepared to work collaboratively with scientists and practitioners in other fields;

- Convey epidemiology concepts to new learners of epidemiology;
- Recognize and identify the ethical issues relating to epidemiological studies used in public health practice and/or research

Student Learning Outcomes

- Students will develop effective written and oral communication skills in the presentation of public health information.
- Students will develop and demonstrate the ability to make scholarly contributions to the field.
- Students will demonstrate mastery of research competencies.