

# **Department of Epidemiology**

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# **DrPH in Epidemiology**

This concentration is designed for health professionals who would like to become leaders in public health, specifically in epidemiology and other related areas. The Department of Epidemiology coordinates this concentration. Graduates will be able to develop their careers in academia, public health institutions or health-care facilities. They will understand public health policies and practices, identify key elements for decision-making, and be able to plan and evaluate health systems and public health programs by using epidemiologic methodology. This concentration provides the expertise and experience to plan, develop, and evaluate epidemiologic surveillance systems. Students will also gain the epidemiologic knowledge and skills to be able to plan and conduct applied epidemiologic research as independent researchers or as members of research teams. A doctoral dissertation is required providing the opportunity to apply the knowledge gained during coursework and other academic activities. The dissertation is expected to analyze and propose solutions to a problem with implications for public health practice, often by translating and applying new theoretical and technical advances to current problems in public health. Graduates of this program will be able to undertake professional, managerial or leadership positions in public health departments or academic settings, such as schools of public health, epidemiologic research institutions, hospitals or other medical facilities. By the conclusion of the Dr.P.H. program, a student in the epidemiology concentration will be able to:

- 1. Conduct epidemiological evaluations for public health programs.
- 2. Assist in the planning, development and evaluation of health systems and programs using epidemiologic methodology.
- 3. Plan, develop and evaluate epidemiologic surveillance systems.
- 4. Analyze and solve a public health issue by applying epidemiologic methodology.
- 5. Communicate findings of the analysis and solution of a problem of public health importance in professional journals.
- 6. Plan and conduct independent research focusing on the analysis and solution of a problem in public health practice.

# **DrPH Prerequisites (30 SCH)**

BIOS	5210	Biostatistics for Public Health I	3 SCH
BIOS	5215	Biostatistics for Public Health II	3 SCH
BIOS	5740	Introduction to Statistical Packages	3 SCH
ENVR	5300	Environmental Health	3 SCH
EPID	5100	Principles of Epidemiology	3 SCH
EPID	5110	Intermediate Epidemiology	3 SCH
EPID	5300	Survey Methodology	3 SCH
EPID	5400	Applied Data Analysis in Epidemiology	3 SCH
ENVR EPID EPID EPID	5300 5100 5110 5300	Environmental Health Principles of Epidemiology Intermediate Epidemiology Survey Methodology	3 SCH 3 SCH 3 SCH 3 SCH 3 SCH

HMAP	5210	Introduction to Health Management and Policy	3 SCH
SCBS	5110	Behavioral and Social Aspects of Public Health	3 SCH

• Prerequisite coursework does not contribute to the required total number of semester credit hours needed to graduate.

## **Epidemiology Curriculum (65 SCH)**

#### CORE COURSES: 22 SCH

BIOS

6760

ENVR 6100 Environmental Health Determinants 3 SC	Η
EPID6100Advanced Methods in Epidemiology I3 SC	H
HMAP6100Health Care Systems3 SC	Ή
SCBS 6100 Social & Behavioral Theories and Health Applications 3 SC	;H
HMAP 6140 Ethical Issues in Public Health 2 SC	;H
HMAP 6145 Leadership for Public Health 2 SC	H
SPH 6900 Doctoral Capstone 3 SC	Ή

- Students should enroll in the Doctoral Capstone (SPH 6900) at the conclusion of all coursework.
- Students must obtain a permission number from their major professor to register for SPH 6900.

4 SCH

3 SCH

3 SCH

# PRACTICE EXPERIENCE: 4 SCH SPH 6860 Public Health Practice Residency REQUIRED COURSES: 12 SCH ENVR 6600 Spatiotemporal Environmental Health Modeling ENID 6615 Enidemiologia Sumraillance

EPID	6615	Epidemiologic Surveillance	3 SCH
HMAP	5450	Public Health Program Planning and Evaluation	3 SCH
EPID	6101	Advanced Methods in Epidemiology II	3 SCH

#### CONCENTRATION REQUIRED ELECTIVE COURSES: 18 SCH

**Multivariate Analysis** 

Choose	e two from t	he following courses:		
EPID	6200	Experimental Methods in Epidemiology	3 SCH	
EPID	6300	Molecular Epidemiology	3 SCH	
EPID	6635	Social Epidemiology	3 SCH	
EPID	6690	Occupational Epidemiology	3 SCH	
Choose	e one from t	the following courses:		
EPID	5610	Chronic Disease Epidemiology	3 SCH	
EPID	5630	Infectious Disease Epidemiology	3 SCH	
Choose one from the following courses:				
BIOS	5720	Survey Sampling	3 SCH	
BIOS	5725	Nonparametric Statistical Methods	3 SCH	
BIOS	5730	Regression Analysis	3 SCH	
BIOS	5735	Analysis of Variance	3 SCH	
BIOS	6750	Applied Categorical Data Analysis	3 SCH	

Choose two from the following courses:			
ENVR	5500	Biomarkers in Environmental Epidemiology	3 SCH
EPID	5200	Epidemiology for Healthcare Practice	3 SCH
EPID	5690	Epidemiology of Bioterrorism/Catastrophic Events	3 SCH
EPID	6670	Cancer Epidemiology	3 SCH
EPID	6910	Doctoral Independent Study in Epidemiology	3 SCH
SCBS	6170	Qualitative Research Methods	3 SCH

Clinical Trials and Survival Analysis

• Students may substitute an elective course not on this list only with prior written approval of the advisor.

- Elective courses not approved as substitutes will not be applied toward the degree plan.
- Students are strongly encouraged to take more semester credit hours than the required minimum.

#### CULMINATING EXPERIENCE: 9 SCH

BIOS

6775

SPH 6950 Dissertation

9 SCH

3 SCH

### **Epidemiology DrPH Qualifying Examination**

Epidemiology Dr.P.H. students are required to pass a qualifying exam which is given in the third week of February and the third week of October each year. In order to take the exam, a student must have a grade point average of 3.0 or higher in all coursework. The exam is a culminating experience that tests the student's ability to integrate and apply knowledge s/he has obtained in courses such as EPID 5110: Intermediate Epidemiology; EPID 6100: Advanced Methods in Epidemiology I; EPID 6615: Epidemiologic Surveillance; biostatistics courses; epidemiologic journals, and other sources outside of the classroom. Students are responsible for informing the Department of Epidemiology of their intentions to take the exam. The exam consists of eight questions, of which a student must successfully answer at least seven questions in order to pass. A student who successfully answers less than six questions will fail the exam. For a student who successfully answers six questions, a decision as to whether the student passes will be made by the exam committee. Students who fail the exam may, upon recommendation of the committee, be allowed to retake a different exam or to take an oral exam. However, an opportunity for retaking the written exam or taking an oral exam is not automatic; students may only retake the exam once.