

# PhD in Epidemiology

## Admission Requirements

In addition to the Graduate College minimum requirements, applicants must meet the following program requirements:

- **Baccalaureate Field** A major in the biological, physical, or social sciences is preferred.
- **Grade Point Average** At least 3.00/4.00.
- **Tests Required** GRE General. For GRE General Tests, the combined verbal and quantitative scores must be at least 300.
- **Minimum English Competency Test Score**
  - **TOEFL** 80, with subscores of Reading 19, Listening 17, Speaking 20, and Writing 21 (iBT Test); 60, with subscores of Reading 19, Listening 17, Writing 21 (revised Paper-Delivered Test), **OR**,
  - **IELTS** 6.5, with subscores of 6.0 for all four subscores, **OR**,
  - **PTE-Academic** 54, with subscores of Reading 51, Listening 47, Speaking 53, and Writing 56.
- **Letters of Recommendation** Three required.
- **Personal Statement** Required; the statement should address the applicant's intended research, career goals, and reason for pursuing the PhD degree in the chosen area.
- **Other Requirements** Applicants may submit their master's thesis as evidence of their ability to plan and complete significant health-related research.

## Degree Requirements

- **Minimum Semester Hours Required:** varies by concentration. 96 from the baccalaureate; 98 from the baccalaureate for the Cancer Epidemiology concentration. Students in the Occupational and Environmental Epidemiology concentration may be required to take 114 to 116 hours, depending on prior course work taken.
- **Course Work:** At least 9 hours must be in 500-level didactic courses in the student's major area. If a collateral area is required by the major, at least 6 hours must be in the collateral area at the 500 level.
- In addition to school-wide standards, no grade below B is acceptable in any Epidemiology or Biostatistics required course. If a grade below B is achieved in such a course, it may be repeated once. Failure to maintain this standard will be grounds for dismissal from the Epidemiology Program.

## School-Wide Requirements

Code	Title	Hours
<b>School of Public Health Core Requirements</b>		
BSTT 400	Biostatistics I	
BSTT 401	Biostatistics II	
EPID 403	Introduction to Epidemiology: Principles and Methods	
IPHS 520	Foundations of Public Health <sup>a</sup>	
<b>Required Non-Credit Training</b>		
	Information Privacy and Security/Health Privacy Training (IPS)	
	Human Subjects Research (HSR)	
	Title IX Training	
	SPH Academic Integrity Tutorial	

a IPHS 520 is only required of PhD students without an MPH degree.

## Divisional Requirements

Code	Title	Hours
<b>Epidemiology Divisional Core Requirements</b>		
BSTT 505	Logistic Regression and Survival Analysis	
BSTT 506	Design of Clinical Trials	
EPID 404	Intermediate Epidemiologic Methods	
EPID 406	Epidemiologic Computing	
EPID 410	Epidemiology of Infectious Diseases	
EPID 411	Epidemiology of Chronic Diseases	
EPID 500	Applied Methods for the Analysis of Epidemiologic Data	
EPID 501	Advanced Quantitative Methods in Epidemiology	
EPID 591	Current Epidemiologic Literature	
EPID 595	Epidemiology Research Seminar	

### Electives

Two 500-level substantive Epidemiology classes, in different areas, to prepare for substantive sections of preliminary examination (e.g. Cardiovascular, Cancer, Aging, Infectious, Pediatrics, Genetics) (4-6 hours)

At least one biological sciences class relevant to student's research area is required if no prior biological sciences background (4 hours). Students may enroll in an undergraduate biological sciences courses; however these hours will not count towards graduation credits for the PhD.

Additional course work in relevant area outside of Epidemiology and approved by the advisor (e.g. Biostatistics, Nutrition, Maternal and Child Health, Environmental Sciences, Sociology) (6 hours)

Remaining electives (13-15 hours)

Note: Students with a master's degree in public health or a related area may receive up to 32 hours of credit towards the 96-hour total.

## Other Requirements

- **Dissertation Proposal** : Required.
- **Dissertation**: Required. Students must register for IPHS 599 for at least 32 semester hours.
- **Preliminary Exam**: Required.
- **Other Requirements**: Each PhD student is required to obtain experience in classroom teaching. The teaching experience for doctoral candidates should at minimum consist of planning, leading and evaluating a minimum of two classroom sessions, which may be online or in-class sessions. If students are clear that they will be pursuing a career in academe, they should be encouraged by their advisors to go beyond this minimum. All PhD students' efforts should be supervised and evaluated by appropriate faculty. Documentation should accompany this evaluation so that PhD students are clearly rated on their efforts at planning, teaching, and evaluating the students in their classes. Efforts of students who are laboratory or teaching assistants should be considered vital teaching experiences as long as there is appropriate evaluation of such efforts by faculty and students. It is

the responsibility of the student and his or her faculty advisor to make sure the student's instructional experience is properly evaluated.

## Additional Course Requirements for those Pursuing a Concentration

### PhD in Epidemiology, Concentration in Occupational and Environmental Epidemiology

PhD students concentrating in the Occupational and Environmental Epidemiology concentration must complete all of the School of Public Health Core requirements for the PhD. Students in the Occupational and Environmental Epidemiology concentration are NOT required to take the Epidemiology Divisional Core requirements.

Code	Title	Hours
EOHS 421	Occupational Health and Safety Practice	
EOHS 495	Environmental/Occupational Health Seminar	
EOHS 501	Exposure Assessment Strategies	
EOHS 502	Environment, Toxicology, and Disease	
EPID 500	Applied Methods for the Analysis of Epidemiologic Data	
EPID/EOHS 530	Current Topics in Occupational and Environmental Epidemiology	
EPID/EOHS 535	Applied Methods in Occupational Epidemiology	
EPID/EOHS 536	Applied Methods in Environmental Epidemiology	
EOHS 556	Risk Assessment in Environmental and Occupational Health	
EPID/EOHS 571	Injury Epidemiology and Prevention	
Select one of the following three courses:		
EOHS/HPA 564	Geographic Information System Application in Public Health	
UPP 461	Geographic Information Systems for Planning and Policy	

### PhD in Epidemiology, Concentration in Cancer Epidemiology

Code	Title	Hours
EOHS 455	Environmental and Occupational Toxicology	
EOHS/HPA 565	Datamining Applications in Public Health	
EPID 515	Cancer Epidemiology	
EPID 516	Advanced Cancer Epidemiology	
EPID 520	Genetics in Epidemiology	
EPID 550	Public Health Surveillance	
EPID 554	Occupational and Environmental Epidemiology	
EPID 594	Advanced Special Topics in Epidemiology	
HN 594	Special Topics in Human Nutrition <sup>a</sup>	
<b>Electives</b>		

Students must take a minimum of 16 hours of electives.

At least one biological science class (4 hours) relevant to the student's research area is required if no prior biological sciences background.

<sup>a</sup> With permission of the division, students may substitute HN 532 and submit a waiver request to apply the credit.

### PhD in Epidemiology, Concentration in Maternal and Child Epidemiology (MCHEPI)

- A minimum of 96 semester hours (32 hours can be transferred from a master's degree).
- Summary of course requirements: 17-18 hours of master's level epidemiology and MCH courses; an additional 2-3 hours of basic epi courses; 6 hours of CHS doctoral theory and methods courses; 7 hours of MCH Epidemiology courses; 18 hours of advanced analytic methods courses; 32 hours of credit for dissertation research; and additional courses to earn the minimum 96 hours.
- A written and oral preliminary exam, including a 4-hour in-class methods exam, a 10-day take-home data analysis, and either in-class or take-home questions covering two substantive areas within MCH as determined by the student's examination committee.
- A dissertation which must be conducted in conjunction with a state or local public health agency or using the data from such agencies.

Code	Title	Hours
<b>Master's-level Epidemiology courses (if no MPH in Epidemiology)</b>		
IPHS 520	Foundations of Public Health	
BSTT 401	Biostatistics II	
EPID 404	Intermediate Epidemiologic Methods	
EPID 406	Epidemiologic Computing	

#### Master's-level MCH courses (if no MPH in MCH)

Select one of the following MCH core courses:

CHSC 510	MCH Inequities and Responses I
CHSC 511	Maternal and Child Health Inequities and Responses Part II
CHSC 543	MCH Policy and Advocacy

Select one of the following Epidemiology required basic courses:

EPID 409	The Epidemiology of HIV/AIDS
EPID 410	Epidemiology of Infectious Diseases
EPID 411	Epidemiology of Chronic Diseases
EPID 550	Public Health Surveillance

#### CHSC Doctoral Theory and Methods courses

CHSC 550	Advanced Theories and Topics in Community Health Sciences
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#### Reproductive/Perinatal and Pediatric Epidemiology courses:

EPID/CHSC 518 <sup>a</sup>	The Epidemiology of Pediatric Diseases
EPID/CHSC 545	Reproductive and Perinatal Health

#### Advanced Analytic Methods courses:

BSTT 505	Logistic Regression and Survival Analysis (Prerequisite for EPID 501) <sup>a</sup>
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EPID 500 Applied Methods for the Analysis of  
Epidemiologic Data

EPID 501 Advanced Quantitative Methods in  
Epidemiology

PA 588 Applied Survey Sampling and Analysis

Select one of the following courses:

BSTT 537 Longitudinal Data Analysis

EPSY 584 Hierarchical Linear Models

**Additional Professional Development Requirements for  
the MCH EPI program**

Journal Club - MCH EPI students host a journal club once a month. All PhD students are invited to attend.

Career Development/Leadership and Management  
Training - Students are required to attend one to  
two IPHS 595 seminars that focus on professional  
development and skills building.

Leadership Training and Coaching - Each MCD PhD  
student is required to meet with an MCH leadership coach  
each year of their academic career.

a *A dissertation which must be conducted in conjunction with a state or  
local public health agency or using the data from such agencies.*