

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 iBT** 80, with subscores of Reading 19, Listening 17, Speaking 20, and Writing 21, **OR**,
 - **IELTS Academic** 6.5, with 6.0 in each of the 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 coursework taken.
- **Coursework:** 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 |
|--|--|-------|
| School of Public Health Core Requirements | | |
| BSTT 400 | Biostatistics I | |
| BSTT 401 | Biostatistics II | |
| EPID 403 | Introduction to Epidemiology: Principles and Methods | |
| IPHS 520 | Foundations of Public Health ^a | |
| Required Non-Credit Training | | |
| | 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 |
|--|--|-------|
| Epidemiology Divisional Core Requirements | | |
| 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 coursework 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:

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| 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 ^a | |

Electives

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.

^a 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 |
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| Master's-level Epidemiology courses (if no MPH in Epidemiology) | | |
| 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:

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| 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:

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| 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

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

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| EPID/CHSC 518 | The Epidemiology of Pediatric Diseases ^a | |
| EPID/CHSC 545 | Reproductive and Perinatal Health | |

Advanced Analytic Methods courses:

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| BSTT 505 | Logistic Regression and Survival Analysis (Prerequisite for EPID 501) ^a | |
| EPID 500 | Applied Methods for the Analysis of Epidemiologic Data | |

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| EPID 501 | Advanced Quantitative Methods in Epidemiology |
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| PA 588 | Applied Survey Sampling and Analysis |
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Select one of the following courses:

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| BSTT 537 | Longitudinal Data Analysis |
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| EPSY 584 | Hierarchical Linear Models |
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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 MCH 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.*