Epidemiology, Ph.D.

Requirements

The Doctor of Philosophy program in epidemiology requires a minimum of 78 s.h. of graduate credit. Graduate students in epidemiology must maintain a g.p.a. of at least 3.00. Those who receive a grade of C in 7 s.h. of coursework may be dismissed from the program.

The Doctor of Philosophy with a major in epidemiology requires the following coursework.

Core Courses

Students must take CPH:7270 Principles of Scholarly Integrity: Public Health during their first year in the fall semester (enroll for 0 s.h.) and in the spring semester (enroll for 1 s.h.). They must retake CPH:7270 if they completed the course more than four years ago or if they have changed degree programs.

Students enrolled part-time (less than 9 s.h.) who have a graduate research assistantship appointment may choose to register in EPID:5925 Epidemiology Journal Club: Evaluating the Literature for 1 s.h.; however, the credit earned for this course will not be applied toward the minimum semester hours required for the Ph.D. in epidemiology.

Students with a strong biosciences background may choose to substitute PATH:5270 Pathogenesis of Major Human Diseases in place of PATH:8133 Introduction to Human Pathology for Graduate Students if it better complements their training plan. This is an advanced course that requires a strong foundation in molecular biology and related disciplines, but may be suitable for some students.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CPH:6100</td>
<td>Essentials of Public Health</td>
<td>2</td>
</tr>
<tr>
<td>BIOS:4120</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>EPID:4400</td>
<td>Epidemiology I: Principles</td>
<td>3</td>
</tr>
<tr>
<td>EPID:5241</td>
<td>Statistical Methods in Epidemiology</td>
<td>4</td>
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<tr>
<td>EPID:5600</td>
<td>Introduction to Epidemiology Data Management and Analysis</td>
<td>3</td>
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<tr>
<td>EPID:5610</td>
<td>Intermediate Epidemiology Data Analysis with SAS and R</td>
<td>3</td>
</tr>
<tr>
<td>EPID:5925</td>
<td>Epidemiology Journal Club: Evaluating the Literature</td>
<td>0-1</td>
</tr>
<tr>
<td>EPID:6050</td>
<td>Research in Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>EPID:6100</td>
<td>Writing a Grant Proposal</td>
<td>3</td>
</tr>
<tr>
<td>EPID:6400</td>
<td>Epidemiology II: Advanced Methods</td>
<td>4</td>
</tr>
<tr>
<td>EPID:7400</td>
<td>Epidemiology III: Advanced Methods</td>
<td>3</td>
</tr>
<tr>
<td>PATH:5270</td>
<td>Pathogenesis of Major Human Diseases</td>
<td>3</td>
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One of these:

PATH:8133 Introduction to Human Pathology for Graduate Students

One of these:

BIOS:6210 Applied Survival Analysis
BIOS:6310 Introductory Longitudinal Data Analysis

One of these:

HHP:3500 Human Physiology
MPB:5153 Graduate Physiology

E Electives

Research Interest Area Electives

Students are encouraged to choose a recommended Research Interest Area Plan of Study. In consultation with their advisor, a student may propose a modified research interest area of the same name. If there is not a good fit with one of the recommended plans, students may propose a new Research Interest Area Plan of Study in consultation with their advisor. Students must prepare a proposed name for the new plan and a brief rationale. Modified and new research interest areas will be reviewed and approved by a majority decision by the Plan of Study committee.

Additional Epidemiology Electives

In addition, students must select at least 3 s.h. from Department of Epidemiology courses (prefix EPID) outside their research interest area.

Dissertation

Students must successfully complete a Ph.D. thesis.

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<th>Code</th>
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<th>Hours</th>
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<tr>
<td>EPID:7000</td>
<td>Thesis/Dissertation</td>
<td>10-18</td>
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</table>

Other Requirements

Preceptorship Requirement

Doctoral students who did not complete the M.S. program in epidemiology at the University of Iowa are required to take EPID:5950 Preceptorship in Epidemiology or demonstrate that an equivalent course has been completed, such as a completed master’s thesis at another institution. This requirement must be fulfilled within one year of admission to the Ph.D. program.

Department of Epidemiology Seminar

Every week during fall and spring semesters, the Department of Epidemiology seminar provides a forum for speakers to present information or research pertaining to diverse topics in epidemiology. Students are expected to achieve at least 80 percent attendance at the seminar during each semester of enrollment.

Journal Club for First-Year Students

Journal Club for first-year students is for those who are new to the department. The focus is for students to gain experience reading, in interpretation, and in critically evaluating recently published journal articles. Students should register in EPID:5925 Epidemiology Journal Club: Evaluating the Literature. Ph.D. students who have experience with journal reviews may ask to participate in the regular Journal Club.
Journal Club
Every other week during the academic year, the Journal Club meets to discuss articles of interest in the field. Contact information for the Journal Club coordinators can be found on the Department of Epidemiology website under Preceptorship, Journal Club, and Seminar Contacts. Information about the schedule is distributed to students each semester. Students are required to achieve at least 80 percent attendance at Journal Club for five semesters during their time in the program. Attendance earned while enrolled as a M.S. student does not count towards the required five semesters.

Scientific Poster Requirement
Every student is required to present at least one scientific poster at the department level and one poster at the international, national, regional, state, or University level, at some point prior to graduation. A student’s advisor or dissertation mentor can help determine the suitability and timeline for the poster presentation.

Seminar Presentation
In addition to the dissertation defense, students are required to make a presentation at a Department of Epidemiology seminar. It is recommended that students complete the seminar presentation and dissertation defense in the same semester, with the seminar presentation scheduled before the defense so the seminar can serve as preparation for the defense.

Human Subjects Protections (IRB) Certification
Students are required to provide evidence that they have completed an approved education program in human subjects protections. This should be done at the time of appointment to a graduate research assistantship position, at the start of the preceptorship, or at the start of thesis/dissertation research. More information is available about the human subjects protections certification on the University of Iowa’s Human Subjects Office website.

Examinations
All doctoral students must successfully complete a qualifying examination, a comprehensive examination, a dissertation prospectus, and a dissertation. The research topic and content, which vary depending on the program of study, must be approved by a student’s dissertation committee.

Combined Programs
Ph.D./M.D.
Students may work toward the Doctor of Medicine degree and a Ph.D. in epidemiology in a combined degree program offered by the Carver College of Medicine and the College of Public Health. Applicants must be admitted to both programs before they may be admitted to the combined degree program. See the Medical Scientist Training Program (Carver College of Medicine) in the Catalog.

Admission
Applicants must apply through the Schools of Public Health Application Service (SOPHAS); they also must pay the required application fee to the Graduate College through the University of Iowa Office of Admissions when prompted. For detailed application information, visit How to Apply to the Department of Epidemiology web page.

The epidemiology faculty considers several factors when evaluating applications for admission, including Graduate Record Exam (GRE) General Test scores, grade-point average, letters of recommendation, intent and motivation for graduate study, and research interests. Students with deficiencies in one area may be admitted if all other components of their application are very strong.

All applicants must hold a baccalaureate degree (an M.S. or M.P.H. usually is required) and must have a cumulative g.p.a. of at least 3.00. Courses in the biological, physical, and mathematical sciences provide important background; one semester of calculus, one semester of statistics or biostatistics, and two semesters of biological sciences are highly recommended. Computing skills also are desirable.

Applicants must have taken the Graduate Record Examination (GRE) General Test, the Medical College Admission Test (MCAT), or the Dental Admission Test (DAT), scoring above the 50th percentile, within four years before applying to the epidemiology program. The department prefers recent test scores, particularly for applicants who completed educational programs and/or courses after taking one of these tests.

Applicants whose first language is not English must submit official test scores to verify English proficiency. Applicants can verify English proficiency by submitting official test scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

All applicants and students are required to have strong written and oral communication skills.

Financial Support
A limited number of graduate research assistantships are available for advanced students; for information, consult the Department of Epidemiology website.

Scholarships for incoming students are available; for information, visit the Department of Epidemiology website.

Opportunities for funded predoctoral fellowships are available. Funded positions sponsored by federal agencies are available only to U.S. citizens.

Career Advancement
The program prepares graduate students for careers as scientists, teachers, and practitioners of epidemiologic methods. Employment opportunities exist in academic institutions; local, state, and federal health agencies; and in private enterprises.