This handbook describes the academic requirements, policies and programs in the Department of Epidemiology. The contents of this handbook are a supplement to the official Harvard School of Public Health Student Handbook. Epidemiology students are responsible for general knowledge of, and adherence to, the policies and requirements described in the HSPH Student Handbook and the Epi Department Student Handbook.

Where school-wide and departmental policies overlap, the Harvard School of Public Health Student Handbook takes precedence (http://www.hsph.harvard.edu/student-handbook/). The Department of Epidemiology reserves the right to update the information published in the Handbook as necessary. All information correct at time of publication ©2014
Department Administration

Dr. Michelle Williams  
Chair, Department of Epidemiology  
Phone: 617.432.6477  
E-mail: mawilliams@hsph.harvard.edu

Dr. E. Francis Cook 
Deputy Chair, Department of Epidemiology  
Phone: 617.525.6716  
E-mail: ecook@partners.org

Ms. Coppelia Liebenthal 
Assistant to the Chair  
Phone: 617.432.6477  
E-mail: cliebent@hsph.harvard.edu

Mr. John Paulson 
Associate Director of Graduate Studies  
Phone: 617.432.1055  
E-mail: jpaulson@hsph.harvard.edu

Ms. Katherine Becker 
Graduate Studies Coordinator  
Phone: 617-432-1328  
Email: kbecker@hsph.harvard.edu

Associated web links:

Harvard University www.harvard.edu

Harvard Medical School www.hms.harvard.edu

Harvard School of Dental Medicine www.hsdm.harvard.edu

Channing Laboratory www.channing.harvard.edu

Brigham and Women’s Hospital www.brighamsandwomens.org

Beth Israel Deaconess Medical Center www.bidmc.org

Dana Farber www.dana-farber.org
Mission
We strive to accomplish our mission through three major approaches:

• **RESEARCH**
  Well-grounded multidisciplinary research toward assessing the distribution and determinants of human illness with the aim of establishing reasoned preventive measures.

• **METHODOLOGY**
  Continuous efforts to improve methods for epidemiological investigation, to enhance validity and efficiency, and to expand the scope of activities in which epidemiologic methods can be usefully applied.

• **EDUCATION**
  Preparation of future researchers and practitioners in the field of epidemiology, as well as dissemination of knowledge to health professionals and the general public. As the reach of the School of Public Health is global in scope, so too is our research program. We are committed to the enhancement of quality of health not only in our own country, but internationally.

Students in the Department of Epidemiology specialize in one of twelve Areas of Interest.

**These Areas of Interest are:**
- Cancer Epidemiology and Cancer Prevention
- Cardiovascular Epidemiology
- Clinical Epidemiology
- Environmental and Occupational Epidemiology
- Epidemiologic Methods
- Epidemiology of Aging
- Infectious Disease Epidemiology
- Genetic Epidemiology and Statistical Genetics
- Neuro-Psychiatric Epidemiology
- Nutritional Epidemiology
- Pharmacoepidemiology
- Reproductive, Perinatal, and Pediatric Epidemiology
## Important Dates 2014-15

### Academic Dates 2014-15

<table>
<thead>
<tr>
<th>Summer 2014</th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1-August 15</td>
<td>September 2-December 19</td>
<td>January 5-May 15</td>
</tr>
<tr>
<td>Summer 1</td>
<td>Fall 1</td>
<td>Winter Session</td>
</tr>
<tr>
<td>July 1-July 25</td>
<td>September 2-October 24</td>
<td>January 5-January 23</td>
</tr>
<tr>
<td>Summer 2</td>
<td>Fall 2</td>
<td>Spring 1</td>
</tr>
<tr>
<td>July 28-August 15</td>
<td>October 27-December 19</td>
<td>January 26-March 13</td>
</tr>
<tr>
<td>Spring 2</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>March 23-May 15</td>
</tr>
</tbody>
</table>

The most current and complete academic calendar can be found [here](#).

### Holidays and Events

<table>
<thead>
<tr>
<th>Summer 2014</th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, July 1- SM-1 Summer student orientation</td>
<td>Monday, September 1-Labor Day</td>
<td>Monday, January 19-Martin Luther King Day</td>
</tr>
<tr>
<td>Friday, July 4-Independence Day</td>
<td>Monday, October 13-Columbus Day</td>
<td>Monday, February 16 President’s Day</td>
</tr>
<tr>
<td>Monday, August 25-Friday, August 29-New Student Orientation</td>
<td>Tuesday, November 11 Veterans Day</td>
<td>Monday, March 16-Friday, March 20 Spring Recess</td>
</tr>
<tr>
<td></td>
<td>November 26/28-Thanksgiving Recess</td>
<td>TBA-Cutter Lecture</td>
</tr>
<tr>
<td></td>
<td>TBA-Cutter Lecture</td>
<td>Thursday, May 28 - Commencement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monday, December 22- Friday, January 2 Winter Recess</td>
<td></td>
</tr>
</tbody>
</table>

For more information regarding the Epidemiology Seminar Series, click [here](#).

### Degree Candidacy Dates

<table>
<thead>
<tr>
<th>For Diploma Date</th>
<th>Degree Applications Due</th>
<th>Dissertations Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 28, 2015</td>
<td>February 6, 2015</td>
<td>April 24, 2015</td>
</tr>
</tbody>
</table>
# Table of Contents

## Section One
**General Academic Information**
- Admission Policies and Requirements: 1
- Advisors: 1
- Course Waivers and Requirements: 2
- Financial Aid and Graduate Funding: 2
- Independent Study Contracts: 2
- Teaching Assistant Experience: 3
- Training Grants: 3
- WinterSession: 4

## Section Two
**Master of Science Program (Summer)**
- Introduction: 5
- Program Competencies: 5
- Requirements: 6
- Supervised Research EPI 315: 6
- Electives: 7
- Schedule: 7

## Section Three
**Master of Science Program (One-year)**
- Introduction: 8
- Program Competencies: 8
- Course Completion: 8
- Requirements/Schedule: 9

## Section Four
**Master of Science Program (Two-year)**
- Introduction: 10
- Program Competencies: 10
- Timeline and Requirements: 11
- Sample Schedule: 12
- Master’s Thesis Requirements and Guidelines: 13

## Section Five
**Doctor of Science Program (SD)**
- Introduction: 14
- Program Competencies: 14
- Program Requirements: 15
- Suggested Schedule: 16
- Ordinal Credit Requirements: 17
- Prospective/Final Program: 17-19
- Written Exam: 20
- Data Collection and Additional Recommendations: 21
- Oral Exam: 22
- Research Committee and Doctoral Thesis: 23
- Thesis Requirements: 24

## Section Six
**Interdisciplinary Concentrations**
- Inter-Disciplinary Concentration: 25

## Section Seven
**Department Course Listings**
- Epidemiology Course Listing: 26-28

## Section Eight
**Student Resources and Information**
- Committees: 29
- Additional Department Resources / Staying Connected: 30-31
Admission Policies and Requirements

Applicants apply to the Schools of Public Health Application Service (SOPHAS). The Department of Epidemiology adheres to all Office of Admissions deadlines and policies, and review of applications is conducted by the department. Admittance to a master’s or doctoral program does not guarantee transfer or acceptance to another program within the school or department, and students must meet admission requirements.

More information about the Admissions process for prospective students can be found here.

Admission to the Master of Science or Master of Public Health Programs

Current Masters Students

Epidemiology master’s candidates are welcome to apply to the doctoral program during the normal admissions cycle. Students are required to submit an electronic application through the Schools of Public Health Application Service (SOPHAS) online during the next admissions season and will be notified of the decision from the Office of Admissions.

Two-year master of science students must complete all graduation requirements on schedule, even if they will be matriculating to the doctoral program at the end of the second year.

More information about the Admissions process for prospective students can be found here.

Admission to the Doctoral Program—Current Masters Students

Epidemiology master’s candidates are welcome to apply to the doctoral program during the normal admissions cycle. Students are required to submit an electronic application through the Schools of Public Health Application Service (SOPHAS) online during the next admissions season and will be notified of the decision from the Office of Admissions.

Admission to the Master of Science or Doctor of Science

Students adding or changing department

Students from other departments at the School of Public Health may apply for dual major or apply to change department affiliation to Epidemiology. In either case, students submit an abbreviated application form, two new letters of recommendation, and a statement of purpose. Students are notified of the decision by the Office of Admissions.

Advisors

The Epidemiology Department appoints a faculty advisor who is working in an area related to the student’s field of interest. The advisor provides the student with academic guidance, information, and general assistance. For students in the SD, 80 credit SM, and Summer Only 42.5 credit SM degrees the advisor serves as research mentor on the thesis requirement. The advisor and the advisee must meet at least twice during the academic year (before the start of the fall and spring semesters) to discuss the student’s proposed course of study and any procedural or personal issues relevant to the student's academic experience. For more information on advising refer to the HSPH student handbook.
Course Waivers

School-Wide Core Courses (EPI201, BIO 201): Epidemiology students wishing to waive EPI201 or BIO 201 must submit a Waiver of Core Course Form (obtained from the registrars office), and signed by the relevant instructor. Students must present a transcript and a copy of the course description to the Course Instructor to verify appropriate coursework. If the request to waive a core course is approved, the student will not be required to enroll in the core course. Because of the strong integration between EPI 201 and EPI 202, Epidemiology students are not advised to waive EPI 201, even if they have taken an introductory Epidemiology course elsewhere.

EPI Department Required Courses: Students wishing to request a waiver for other departmental required courses must submit the EPI Requirement Waiver Form (obtained from the Associate Director of Graduate Studies). This form should be submitted to the Associate Director of Graduate Studies along with a copy of the syllabus and a transcript from the institution where the course was taken. The student and their academic advisor will be notified of the decision on the waiver and a copy will be placed in the student’s academic file.

Physicians are not required to take the physiology or pathophysiology courses. Such students should consult with their advisor at the start of their program and notify the Associate Director of Graduate Studies. Other students with relevant coursework completed (before entering the program) in these areas may petition to waive this requirement.

Financial Aid and Graduate Funding

Funding for graduate programs can come from a variety of sources, including but not limited to:

- Departmental (partial awards on a yearly basis for new and returning students)
- Doctoral training grant stipend/tuition awards (NIH funding through department)
- Non-institutional awards (selective private/partial awards specific criteria for eligibility)
- Loans and grants through the office of Financial Aid
- Loans/scholarships that may be available from the student’s home country or state

While the department makes every effort to secure as many funding opportunities for new and returning students, there is no guarantee that every student will receiving funding. Students are encouraged to seek out as many different sources of funding as early as possible.

Independent Study/Tutorial (EPI 300)

Registration for an independent study/tutorial represents an agreement between the student and a faculty member that the student will work on a specific project, which will be supervised, by the faculty member. A student may register for up to 5 credits of EPI 300 in preparation for the written exam, during the term in which s/he takes the exam. SM2 students may register for up to 5 credits of EPI 300 for thesis research and writing, during the term in which the thesis is submitted. Contact the Associate Director of Graduate Studies for more information.
**Teaching Assistant Experience**

Doctoral students are strongly encouraged to gain teaching experience by serving as teaching assistants. This will help consolidate the understanding of the material and provide valuable experience in teaching. Often, faculty who write reference letters are asked to comment on teaching experience and skills. Teaching assistant positions are available throughout the terms in the academic year and during the summer session. Teaching assistants for core epidemiology courses are typically limited to students who have passed the departmental written exam.

Responsibilities (designated by the instructor) may include: attending lectures and organizational meetings, grading homework and exams, designing assignments and answer keys, holding office hours, updating the course site and coordinating room bookings/media requests, and running labs/leading seminars. Teaching Assistants are expected to respect confidentiality and privacy of student information. New Teaching Assistants should participate in training at the beginning of the academic year. Interested students should contact the Associate Director of Graduate Studies.

**Training Grants**

The Department of Epidemiology has a long tradition of excellence in research and training. Through support from the National Institutes of Health, pre- and post-doctoral fellowships are available in areas such as Cardiovascular Epidemiology, Cancer Epidemiology, Environmental and Occupational Epidemiology, and Reproductive Epidemiology. These fellowships are only available to citizens and permanent residents of the United States.

**Application and Eligibility**

Trainee positions open when current trainees graduate or leave the program. Candidates are reviewed selectively by the faculty throughout the year. For more information on fellowships available through the Department of Epidemiology contact the Associate Director of Graduate Studies.

**Student Responsibilities and Expectations**

Any doctoral student receiving a fellowship funded by the National Institutes of Health must cite the granting agency on any papers or presentations based on work done as part of the training and the principal investigator can provide the appropriate wording for the citation. Some training grants require students supported by that grant to answer the substantive questions in that area; students are responsible for meeting this requirement.
WinterSession

All full-time students are expected to participate in WinterSession activities, whether for credit or not for credit, on-campus or off-campus, in accordance with their individual needs and interests. WinterSession is optional for part-time students.

The Epidemiology Department requires that each full-time student formulate a plan (or request an exemption) for the WinterSession. All full-time students must complete the WinterSession contract, which must be approved and signed by the advisor. The original signed copy of the form must be submitted by December 1 to the Associate Director of Graduate Studies. Questions and concerns are presented to the department chair for adjudication.

Acceptable activities might include courses, tutorials/independent study projects (with faculty members who are willing to take on this role), travel tutorials, field placements, practica, community service projects, courses organized and taught by students, and skill-building workshops sponsored by administrative departments of the school. Approved activities need not be located on campus.
Section Two

42.5 Credit Master of Science Program (Summer)

Introduction
Detailed below are the Epidemiology Department specific requirements for the 42.5 credit Master of Science degree. These supplementary guidelines add to, but do not replace, the rules in the HSPH student handbook and other listed epidemiology department requirements. The purpose of these guidelines is to standardize expectations across the masters students’ experience while simultaneously maintaining a vital flexibility in the program. If a student or faculty member believes these guidelines are not met, the department chair should be consulted.

The degree program can be completed over 3 summer semesters. The 42.5 credit program is built on short courses of 1-3 weeks offered during the summer and winter academic sessions along with a few online course options. A Thesis is required for this degree and a thesis proposal and local mentor is required for application. The sequence of courses taken by a student to satisfy this degree’s requirement depends on whether the student begins training with the Summer Program in Clinical Effectiveness, the Summer Session for Public Health Studies or by completing the June Integrated Course in Clinical Epidemiology and Biostatistics (ID207). Under this option, students can enroll in advanced methods courses in the subsequent summer periods. Watch the informational video found here to learn more.

Epidemiology 42.5-credit degree Competencies

At the end of the program, the student will be able to:

- Demonstrate basic skills in core public health sciences of epidemiology and biostatistics.
- Develop comprehensive knowledge of the role of epidemiology as a basic science for public health and clinical medicine to provide a quantitative approach to addressing public health and clinical problems.
- Interpret descriptive epidemiologic results in order to develop hypotheses of possible risk factors for a disease.
- Critically evaluate public health and medical literature through knowledge gained of the basic principles and methods of epidemiology, including disease (outcome) measures, measures of association, study design options, bias, confounding, and effect measure modification.
- Develop a foundation for designing valid and efficient protocols to address public health and clinical problems.
<table>
<thead>
<tr>
<th>Starting Program with</th>
<th>Program in Clinical Effectiveness</th>
<th>Summer Session in Public Health Studies</th>
<th>June Integrated Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro Epi (Year 1)</td>
<td>EPI208 (5 credits)</td>
<td>EPI500 (2.5 credits) EPI202 (2.5 credits)</td>
<td>ID207 (7.5 credits)</td>
</tr>
<tr>
<td>Intro Biostat (Year 1)</td>
<td>BIO206 (2.5 credits) BIO208 (2.5 credits)</td>
<td>BIO 202 (2.5 credits) BIO 203 (2.5 credits)</td>
<td></td>
</tr>
<tr>
<td>Advanced Epi (Year 2)</td>
<td>EPI236 (5 credits) EPI210 (2.5 credits)</td>
<td>EPI236 (5 credits) EPI210 (2.5 credits)</td>
<td>EPI236 (5 credits) EPI210 (2.5 credits)</td>
</tr>
<tr>
<td>Additional Requirements (Year 1 and/or Year 2)</td>
<td>2.5 credits from EPI202 (2.5) or EPI288 (2.5) or EPI293 (2.5) or EPI271 (1.25) or EPI209 (1.25) or EPI209 (1.25) or EPI509 (1.25) or BIO214 (2.5) or BIO224 (2.5) or BIO501 (2.5) or BIO213 (5)</td>
<td>2.5 credits from EPI288 (2.5) or EPI293 (2.5) or EPI 271 (1.25) or EPI209 (1.25) or EPI209 (1.25) or EPI509 (1.25) or BIO214 (2.5) or BIO224 (2.5) or BIO501 (2.5) or BIO213 (5)</td>
<td>5 credits from EPI202 (2.5) or EPI288 (2.5) or EPI293 (2.5) or EPI 271 (1.25) or EPI209 (1.25) or EPI209 (1.25) or EPI509 (1.25) or BIO214 (2.5) or BIO224 (2.5) or BIO501 (2.5) or BIO213 (5)</td>
</tr>
<tr>
<td>Thesis Requirement (Year 1 and Year 2)</td>
<td>EPI 218 (2.5) and EPI 315 (2.5 – 10)</td>
<td>EPI 218 (2.5) and EPI 315 (2.5 – 10)</td>
<td>EPI 218 (2.5) and EPI 315 (2.5 – 10)</td>
</tr>
<tr>
<td>Electives (Year 1 and Year 2)</td>
<td>10 to 17.5 credits</td>
<td>10 to 17.5 credits</td>
<td>10 to 17.5 credits</td>
</tr>
</tbody>
</table>

**Credit Requirement Note:** Students must earn a minimum of 30 *ordinal* credits in order to graduate.
Supervised Research—EPI 315

All students in the Master of Science Summer Program are required to complete a supervised research project (Master’s Thesis) prior to graduation. A potential proposal for a supervised research project is required with the application to HSPH. The application should also include a letter from local mentor indicating that the mentor has read the proposal and agrees to supervise the student on the project. In addition, a Harvard faculty member (ideally from the Department of Epidemiology) is identified by the end of the second summer of course work to be the supervisor of the project. The Harvard faculty member determines when the project is completed (typically when there is a manuscript suitable for publication).

Students should register for EPI 315 in the Summer session if the project is to be completed in time for a November graduation date. Registration in EPI 315 during Winter Session is required for a March graduation date, or Spring Semester for a May graduation date.
Section Three 42.5 Credit Master of Science Program (Academic Year)

Introduction
Detailed below are the Epidemiology Department specific requirements for the 42.5 credit Master of Science degree. These supplementary guidelines add to, but do not replace, the rules in the HSPH student handbook and other listed epidemiology department requirements. The purpose of these guidelines is to standardize expectations across the masters students’ experience while simultaneously maintaining a vital flexibility in the program. If a student or faculty member believes these guidelines are not met, the department chair should be consulted.

Course Completion
When pursuing the Academic Year, 42.5 credit Master of Science degree, students typically begin in the Fall semester, beginning in the summer session is also possible though not recommended. At least one course must be taken in the Fall and Spring semesters. Students are not required to write a thesis.

Epidemiology 42.5 Credit Degree Competencies
At the end of the program, the student will be able to:

- Demonstrate basic skills in core public health sciences of epidemiology and biostatistics.

- Develop comprehensive knowledge of the role of epidemiology as a basic science for public health and clinical medicine to provide a quantitative approach to addressing public health and clinical problems.

- Interpret descriptive epidemiologic results in order to develop hypotheses of possible risk factors for a disease.

- Critically evaluate public health and medical literature through knowledge gained of the basic principles and methods of epidemiology, including disease (outcome) measures, measures of association, study design options, bias, confounding, and effect measure modification.

- Develop a foundation for designing valid and efficient protocols to address public health and clinical problems.
Academic Year, 42.5 Credit Master of Science Requirements

**ALL EPI and BIOSTATS requirements listed below must be taken for an ORDINAL grade**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 201 *</td>
<td>Introduction to Epidemiology</td>
<td>2.5</td>
</tr>
<tr>
<td>EPI 202</td>
<td>Elements of Epidemiologic Research</td>
<td>2.5</td>
</tr>
<tr>
<td>EPI 203</td>
<td>Study Design in Epidemiologic Research</td>
<td>2.5</td>
</tr>
<tr>
<td>EPI 204</td>
<td>Analysis of Case-Control and Cohort Studies</td>
<td>2.5</td>
</tr>
<tr>
<td>BIO 201</td>
<td>Introduction to Statistical Methods</td>
<td>5</td>
</tr>
<tr>
<td>BIO 210 or 213</td>
<td>Analysis of Rates and Proportions (5) or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Applied Regression for Clinical Research (5)</td>
<td></td>
</tr>
</tbody>
</table>

**Credit Requirements**

- **42.5** Total Credits Earned
- **30/42.5** Ordinal Credits
- **10** Ordinal Credits in Epidemiology
- **10** Ordinal Credits in Biostatics

*Students beginning the program in the Summer can replace EPI 201 with either EPI 208 or EPI 500. In this case it is advisable to consult with the instructor of EPI202 regarding course preparation.*

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<table>
<thead>
<tr>
<th>Academic Year, 42.5 Credit Master of Science Sample Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Semester</strong></td>
</tr>
<tr>
<td>EPI 201</td>
</tr>
<tr>
<td>EPI 202</td>
</tr>
<tr>
<td>BIO 201</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

| **Spring Semester**                                         |
| EPI 204                                                     | Analysis of Case-Control and Cohort Studies | Spring II    |
| EPI 203                                                     | Study Design in Epidemiologic Research | Spring II    |
| BIO 210                                                     | Analysis of Rates and Proportion | Spring       |
| Electives                                                   | 10-12.5 Credits | Spring        |
Section Four

Introduction
Detailed below are the Epidemiology Department specific requirements for the 80 credit Master of Science degree. These supplementary guidelines add to, but do not replace, the rules in the HSPH student handbook and other listed epidemiology department requirements. The purpose of these guidelines is to standardize expectations across the masters students’ experience while simultaneously maintaining a vital flexibility in the program. If a student or faculty member believes these guidelines are not met, the department chair should be consulted. In addition to epidemiologic methods and biostatistics requirements, students may choose from a wide variety of substantive epidemiology courses as well as electives offered in other departments at HSPH and other schools at Harvard.

Epidemiology 80-credit SM degree Competencies
At the end of the program, the student will be able to:

- Demonstrate basic skills in core public health sciences of epidemiology and biostatistics as listed in the MPH Curriculum Guide.
- Develop comprehensive knowledge of the role of epidemiology as a basic science for public health and clinical medicine to provide a quantitative approach to addressing public health and clinical problems.
- Interpret descriptive epidemiologic results in order to develop hypotheses of possible risk factors for a disease.
- Critically evaluate public health and medical literature through knowledge gained of the basic principles and methods of epidemiology, including disease (outcome) measures, measures of association, study design options, bias, confounding, and effect measure modification.
- Develop and apply quantitative skills to analyze and synthesize epidemiologic data related to public health issues.
- Apply knowledge of the physiology and pathophysiology of human disease to epidemiologic studies.
- Develop the skills to interpret the methods for disease screening.
- Develop substantive knowledge of the epidemiology of infectious and chronic disease and apply this knowledge to public health issues.
- Design an epidemiologic investigation (Master’s Thesis) resulting in a publishable manuscript or grant application.
80 Credit Master of Science Thesis Timeline

**Year One**

*Fall* Begin to consider the topic for master’s thesis and consult with advisor.

*Spring* Choose designated reader.

**Year Two**

*Fall* Master’s thesis topic should be formalized and submitted to the advisor for approval and then to the Department of Epidemiology Chair for approval. The submission to the Chair need only be one page outlining the paper’s hypothesis in addition to describing the research methods and data to be employed. After receiving approval from your advisor email your proposal to the Associate Director of Graduate Studies and cc your advisor. It must be submitted before the end of the Fall 1 term. The Chair will review all submissions and send an e-mail of approval or disapproval of the topic with revision suggestions if not approved.

*Spring* Master’s thesis must be submitted to the reader by the beginning of the Spring 2 term. If the advisor is not the reader, the reader’s comments on the thesis must be submitted to the advisor. The advisor or reader must submit the thesis and approval form to the Associate Director of Graduate Studies by May 17, 2013.

80 Credit Master of Science Requirements

<table>
<thead>
<tr>
<th>ALL EPI and BIOSTATS requirements listed below must be taken for an ORDINAL grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 201</td>
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<tr>
<td>EPI 202</td>
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<tr>
<td>EPI 203</td>
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<tr>
<td>EPI 204</td>
</tr>
<tr>
<td>EPI 289</td>
</tr>
<tr>
<td>EPI 507</td>
</tr>
<tr>
<td>BIO 201</td>
</tr>
<tr>
<td>BIO 210 or</td>
</tr>
<tr>
<td>BIO 213</td>
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</tbody>
</table>

**Strongly Recommended Courses**

| EPI 215  | Advanced Topics in Case Control and Cohort Studies (2.5) |
| EPI 515  | Measurement Error and Misclassification for Epidemiologists (1.25) |
| EPI 207  | Advanced Epidemiologic Methods (2.5) |
| EPI 247  | Epidemiologic Methods Development (2.5) |
| BIO 223  | Applied Survival Analysis & Discrete Data (5) |
| BIO 226  | Applied Longitudinal Analysis (5) |

**Credit Requirements**

| 80  | Total Credits Earned |
| 60/80  | Ordinal Credits |
| 30  | Epidemiology Credits |
| 25/30  | Ordinal Epidemiology Credits |
| 15  | Ordinal Biostatistics Credits |
# 80 Credit Master of Science | Sample Schedule

## Year One | Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 201</td>
<td>Introduction to Epidemiology (2.5)</td>
<td></td>
</tr>
<tr>
<td>EPI 202</td>
<td>Elements of Epidemiologic Research (2.5)</td>
<td></td>
</tr>
<tr>
<td>BIO 201</td>
<td>Introduction to Statistical Research (5)</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>10 Credits</td>
<td></td>
</tr>
</tbody>
</table>

## Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 204</td>
<td>Analysis of Case-Control and Cohort Studies (2.5)</td>
<td>Spring I</td>
</tr>
<tr>
<td>EPI 289</td>
<td>Causal Inference (2.5)</td>
<td>Spring I</td>
</tr>
<tr>
<td>EPI 203</td>
<td>Study Design in Epidemiologic Research (2.5)</td>
<td>Spring II</td>
</tr>
<tr>
<td>BIO 210</td>
<td>Analysis of Rates and Proportion (5)</td>
<td>Spring</td>
</tr>
<tr>
<td>Electives</td>
<td>7.5 credits</td>
<td>Spring</td>
</tr>
<tr>
<td>THESIS</td>
<td>Begin work on topic/research</td>
<td>Spring</td>
</tr>
</tbody>
</table>

## Year Two | Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 507</td>
<td>Genetic Epidemiology (2.5)</td>
<td>Fall</td>
</tr>
<tr>
<td>Electives</td>
<td>17.5 credits</td>
<td>Fall</td>
</tr>
<tr>
<td>THESIS</td>
<td>Work on thesis</td>
<td>Fall</td>
</tr>
</tbody>
</table>

## Spring Semester

| Electives| 20 credits                                                 | Spring  |
| THESIS   | Work on thesis                                             | Spring I|
| THESIS   | Submit to Advisor or Reader at the beginning of Spring I for review/edits | Spring I|
| THESIS   | Submit thesis and approval form to Associate Director of Graduate Studies | Spring II|
Master’s Thesis Requirements and Guidelines:

In addition to the course requirements, candidates in the 80 credit SM program must complete a master’s thesis. This requirement can be fulfilled in one of two ways:

1. Presentation of a published or publishable manuscript on any topic in epidemiology.
2. Presentation of a feasible study protocol in the general form of an R01 grant application, or playing a major role in preparing such a grant for submission.

The text of the manuscript or protocol should be about 2500 - 3500 words in length and should not exceed 6000 words. The thesis must be the result of work done after matriculation in the department, but may also draw on earlier efforts. The paper may have several authors, but the student must legitimately be the first author. If a research protocol is submitted for the thesis requirement, the student need not be principal investigator, but must have a major role in preparing at least one section of the proposal. Students must present an acceptable plan for preparing the thesis to the academic advisor no later than the end of the fifth academic quarter of study. The Chair of the Department must also accept the plan. The thesis must be submitted to the advisor, or another Harvard faculty member whom the student and the advisor agree to designate as reader, by the beginning of the quarter preceding graduation. It must then be approved by the advisor or reader and submitted to the Associate Director of Graduate Studies, along with the Thesis Submission Form, by the final day of the Spring semester.

A good starting point for the thesis may be a term paper. Careful revision according to the original instructor’s comments, and expansion in consultation with that instructor or the advisor can lead to the finished product. There are no standard format requirements for the thesis.

Students may wish to dedicate a tutorial (EPI300) to this effort, but are not required to do so. For part-time SM candidates, the timeline applies to the 3rd and 4th years of study. Failure to submit the thesis by the deadline will result in non-compliance with a departmental requirement and will lead to ineligibility for graduation. In the past, students have had to postpone graduation when failing to meet the deadline.

Master’s candidates who apply and matriculate into the EPI doctoral program may, in some instances, use the master’s thesis as the basis for one of their doctoral thesis papers. See page 24 of this handbook under the heading “Prior Work as Part of the Thesis” for further details.
Section Five

Doctor of Science Program (SD)

Introduction

The requirements for the doctoral degree, and the necessary steps towards meeting those requirements, are written in detail in the HSPH student handbook. These supplementary guidelines are specific to the Department of Epidemiology, and add to, but do not replace, the rules in the HSPH Student Handbook and other listed epidemiology department requirements. The purpose of these guidelines is to standardize expectations across the doctoral students’ experience while simultaneously maintaining a vital flexibility in the program. If a student or faculty member believes these guidelines are not met, the department chair should be consulted.

Unless one is entering the doctoral program having earned a master’s degree at HSPH within the previous 5 years, most of the first two years are devoted to coursework. In addition, doctoral candidates must pass the departmental written examination and the school-wide oral qualifying examination; adhere to the doctoral timetable for maintaining satisfactory progress; complete, defend, and submit a thesis; and gain experience in teaching and research.

Epidemiology doctoral program Competencies

At the end of the program, the student will be able to:

- Demonstrate basic skills in core public health sciences of epidemiology and biostatistics (listed in the MPH Curriculum Guide).
- Develop comprehensive knowledge of the role of epidemiology as a basic science for public health and clinical medicine to provide a quantitative approach to addressing public health and clinical problems.
- Interpret descriptive epidemiologic results in order to develop hypotheses of possible risk factors for a disease.
- Critically evaluate public health and medical literature through knowledge gained of the basic principles and methods of epidemiology, including disease (outcome) measures, measures of association, study design options, bias, confounding, and effect measure modification.
- Develop a foundation for designing valid and efficient protocols to address public health and clinical problems.
- Apply quantitative skills to analyze and synthesize epidemiologic data related to public health issues.
- Apply knowledge of the physiology and pathophysiology of human disease to epidemiologic studies.
- Apply knowledge of classical and modern epidemiologic methods to study design.
- Develop the skills to interpret the methods for disease screening.
- Develop substantive knowledge of the epidemiology of infectious and chronic disease and apply this knowledge to public health issues.
- Design and present an epidemiologic investigation (Dissertation) resulting in a publishable manuscript or grant application.
Doctor of Science—Requirements

ALL EPI and BIOSTATS requirements listed below must be taken for an ORDINAL grade

- EPI 201 Introduction to Epidemiology (2.5)
- EPI 202 Elements of Epidemiologic Research (2.5)
- EPI 203 Study Design in Epidemiologic Research (2.5)
- EPI 204 Analysis of Case-Control and Cohort Studies (2.5)
- EPI 205 Practice of Epidemiology (2.5)
- EPI 207 Advanced Epidemiologic Methods (2.5)
- EPI 247 Epidemiologic Methods Development (2.5)
- EPI 289 Causal Inference (2.5)
- EPI 507 Genetic Epidemiology (2.5)
- BIO 201 Introduction to Statistical Methods (5)
- BIO 210 or BIO 213 The Analysis of Rates and Proportions (5) or Applied Regression for Clinical Research (5)
- BIO 223 or BIO 226 Applied Survival Analysis and Discrete Data Analysis (5) or Applied Longitudinal Analysis (5)
- EH 205 Human Physiology (5)
- EH 208 Pathophysiology of Human Disease (2.5)

Strongly Suggested Courses

- EPI 215 Adv. Topics in Case-Control and Cohort Studies (2.5)
- EPI 515 Measurement Error and Misclassification for Epidemiologists (1.25)

Minimum Credit Requirements

- 10 Substantive Epi Credits (*these could overlap with the ordinal credit requirements below*)

Ordinal credits (*these are the credits you list on your Final Program*)

- 20 credits of above EPI intro-level courses (above EPI 201 or EPI 208 or EPI 500 or EPI 505 or ID 200 or ID 207)
- 10 credits of above intro-level BIO courses (above BIO 200, 201, 206/207/208/209, BIO 202/203) for your Biostats minor
- 10 credits in a 2nd minor

- 80 Total credits (ordinal and pass/fail) by the end of year 2
## Doctor of Science | Suggested Schedule (Full-Time)

### Year One | Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 201</td>
<td>Introduction to Epidemiology (2.5)</td>
<td></td>
<td>Fall 1</td>
</tr>
<tr>
<td>EPI 202</td>
<td>Elements of Epidemiologic Research (2.5)</td>
<td></td>
<td>Fall 2</td>
</tr>
<tr>
<td>BIO 201</td>
<td>Introduction to Statistical Research (5)</td>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>EH 205</td>
<td>Human Physiology (5)</td>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>Electives</td>
<td>5 Credits</td>
<td></td>
<td>Fall</td>
</tr>
</tbody>
</table>

### Spring Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 289</td>
<td>Causal Inference (2.5)</td>
<td></td>
<td>Spring 1</td>
</tr>
<tr>
<td>EPI 204</td>
<td>Analysis of Case-Control and Cohort Studies (2.5)</td>
<td></td>
<td>Spring 2</td>
</tr>
<tr>
<td>EPI 203</td>
<td>Study Design in Epidemiologic Research (2.5)</td>
<td></td>
<td>Spring 2</td>
</tr>
<tr>
<td>BIO 210</td>
<td>Analysis of Rates and Proportion (5)</td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>EH 208</td>
<td>Pathophysiology of Human Disease (5)</td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>PROGRAM</td>
<td>Submit Prospective Program Form</td>
<td></td>
<td>End of 2nd Semester *</td>
</tr>
</tbody>
</table>

### Year Two | Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 207</td>
<td>Advanced Epidemiologic Methods (2.5)</td>
<td></td>
<td>Fall 1</td>
</tr>
<tr>
<td>EPI 247</td>
<td>Epidemiologic Methods Development –Past/Present (2.5)</td>
<td></td>
<td>Fall 2</td>
</tr>
<tr>
<td>EPI 507</td>
<td>Genetic Epidemiology (2.5)</td>
<td></td>
<td>Fall 2</td>
</tr>
<tr>
<td>EH 205</td>
<td>Human Physiology (5)</td>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>Electives</td>
<td>10 Credits</td>
<td></td>
<td>Fall</td>
</tr>
</tbody>
</table>

### Spring Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 226</td>
<td>Applied Longitudinal Analysis (5)</td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>Electives</td>
<td>20 credits</td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>WRITTEN EXAM</td>
<td>Preparation for Written Exam/Take Written Exam</td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>THESIS</td>
<td>Begin work on Research</td>
<td></td>
<td>Spring</td>
</tr>
</tbody>
</table>

### Year Three | Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 205</td>
<td>Practice of Epidemiology</td>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>Electives</td>
<td>17.5 credits</td>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>PROGRAM</td>
<td>Submit Final Program Form (HSPH requires submission end of 3rd Semester but EPI students may submit this form after the Written Exam)</td>
<td></td>
<td>TBA</td>
</tr>
<tr>
<td>PROGRAM</td>
<td>Final Program and Chair of the Oral Exam Committee is approved</td>
<td></td>
<td>TBA</td>
</tr>
</tbody>
</table>

### Spring Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives</td>
<td>20 credits (including credit for thesis)</td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td>ORAL EXAM</td>
<td>Submit Oral Qualifying Exam Scheduling Form 3 weeks before you wish to take the exam</td>
<td></td>
<td>TBA</td>
</tr>
<tr>
<td>DEFENSE</td>
<td>After the Oral Exam, nominate the research committee</td>
<td></td>
<td>TBA</td>
</tr>
</tbody>
</table>

### Years Four and Five

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 350</td>
<td>20 credits of research and Thesis work</td>
<td></td>
<td>TBA</td>
</tr>
<tr>
<td>DISSERTATION DEFENSE</td>
<td>Schedule Dissertation Defense (End of 5th year for Full-Timers, end of 7th year for Part-Timers)</td>
<td></td>
<td>TBA</td>
</tr>
</tbody>
</table>

*Note: TBA (To Be Announced) indicates dates are subject to change.*
Ordinal Credit Requirements

Each doctoral candidate is required to have a minimum of 40 ordinal credits. Candidates with one major must have 20 ordinal credits in the major field of Epidemiology, and 10 ordinal credits in each of 2 minor fields, one of which must be biostatistics.

Candidates with dual majors must have 20 ordinal credits in each major field and 10 ordinal credits in a minor field. For more information refer to your HSPH Student Handbook.

In addition to the ordinal credit requirements, each candidate is also required to meet all of the departmental course requirements. There is also a school-wide requirement that all full-time doctoral students have earned at least 80 credits total by the end of their 4th semester.

Prospective/Final Program

All doctoral candidates are required to submit both a prospective and final program to the registrar’s office, with the exception of students entering directly in from the 80 credit SM in Epidemiology at HSPH who are allowed to submit a combined prospective/final program. When filling out the prospective program please remember that the introductory Epidemiology courses (EPI201, EPI208, EPI500, EPI 505, ID 200, ID 207) cannot be used towards fulfilling the 20 credits required in your major. Likewise, the introductory biostatistics course (BIO200, BIO 202/203, BIO 206/207, BIO201) cannot be used towards the 10 credits required for the biostatistics minor. See the HSPH Student Handbook for further details and deadlines.
# Prospective / Final Program

Name:  John Paulson  
Harvard ID:  00000000  

Major Field 1:  Epidemiology  
Major Field 2:  Infectious Disease Epi  
Minor Field 1:  Biostats  
Minor Field 2:  
Advisor:  George Seage  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Units</th>
<th>Grade</th>
<th>Semester/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 202</td>
<td>Epi Methods 2</td>
<td>2.5</td>
<td>A</td>
<td>Fall 2/2012</td>
</tr>
<tr>
<td>EPI 203</td>
<td>Study Design</td>
<td>2.5</td>
<td>A</td>
<td>Spring 2/2013</td>
</tr>
<tr>
<td>EPI 204</td>
<td>Analysis of Case Control/Cohort</td>
<td>2.5</td>
<td>A</td>
<td>Spring 2/2013</td>
</tr>
<tr>
<td>EPI 289</td>
<td>Causal Inference</td>
<td>2.5</td>
<td>A-</td>
<td>Spring 1/2013</td>
</tr>
<tr>
<td>EPI 207</td>
<td>Advanced Epi Methods</td>
<td>2.5</td>
<td>A</td>
<td>Fall 1/2013</td>
</tr>
<tr>
<td>EPI 247</td>
<td>Epi Methods Development</td>
<td>2.5</td>
<td>A-</td>
<td>Fall 2/2013</td>
</tr>
<tr>
<td>EPI 507</td>
<td>Genetic Epi</td>
<td>2.5</td>
<td>A</td>
<td>Fall 2/2012</td>
</tr>
<tr>
<td>EPI 233</td>
<td>Research Synth/Meta-Analysis</td>
<td>2.5</td>
<td>A</td>
<td>Spring/2014</td>
</tr>
</tbody>
</table>

Total Credits:  20  

Minor Field 1 or Major Field 2:  Infectious Disease Epi  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Units</th>
<th>Grade</th>
<th>Semester/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI 501</td>
<td>Dynamics of Infectious Diseases</td>
<td>2.5</td>
<td>A</td>
<td>Fall 2/2012</td>
</tr>
<tr>
<td>EPI 255</td>
<td>HIV Epi I</td>
<td>2.5</td>
<td>A</td>
<td>Fall 1/2013</td>
</tr>
<tr>
<td>EPI 519</td>
<td>Evolutionary Epi of ID</td>
<td>2.5</td>
<td>A</td>
<td>Fall 2/2013</td>
</tr>
<tr>
<td>EPI 256</td>
<td>HIV Epi 2</td>
<td>2.5</td>
<td>A</td>
<td>Spring 2/2014</td>
</tr>
</tbody>
</table>

Total Credits:  10  

Minor Field 2:  Biostatistics  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Units</th>
<th>Grade</th>
<th>Semester/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 210</td>
<td>Rates and Proportions</td>
<td>5</td>
<td>A</td>
<td>Spring/2013</td>
</tr>
<tr>
<td>BIO 223</td>
<td>Survival Analysis</td>
<td>5</td>
<td>A</td>
<td>Spring/2014</td>
</tr>
</tbody>
</table>

Total Credits:  10
Name: John Paulson
Harvard ID: 00000000

Required Courses: Please indicate below the courses you have taken to fulfill the Biostatistics and Epidemiology requirements.

EPIDEMIOLOGY: Check one
☒ EPI200a, Semester and Year: Fall 2012

BIOSTATISTICS: List two intermediate level courses:
Courses Code and Title: BIO 210/Rates and Proportions Semester and Year: Spring 2013
Courses Code and Title: BIO 223/Survival Analysis Semester and Year: Spring 2014

Complete this section only if this is your FINAL PROGRAM:

Nominations for Oral Qualifying Examination Committee:

Research Advisor: George Seage

Nominees (Please Print):
Faculty 1
Faculty 2
Faculty 3

Nominee Will Examine in:
Epidemiology
Infectious Disease Epi
Biostatistics

Statement of Goals and Objectives (attach an additional sheet if necessary). Also note any changes from your approved Prospective Program:


Faculty Advisor's Comments (include comments on Qualifying Committee in relation to the proposed research):


Required Signatures of Approval (To be completed for the Prospective and Final Programs):

Advisor Approval Date
Department Chair Approval Date
Department Chair Approval (Dual Degree Candidates Only) Date

CAD Action:
☒ Your Prospective/Final Program has been approved by the Doctoral Subcommittee of the CAD.
☒ Your Prospective/Final Program has not been approved by the Doctoral Subcommittee of the CAD.

Comments:


Doctoral Subcommittee of the CAD Date
Written Examination

The written examination is divided into two portions. The first session covers methods, including aspects of study design, analysis, and causal inference. As a guideline, a student should not attempt this exam until she or he has completed all of the following courses:

<table>
<thead>
<tr>
<th>Courses to complete before attempting the Written Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 201</td>
</tr>
<tr>
<td>BIO 210 or BIO 213</td>
</tr>
<tr>
<td>BIO 223 or BIO226</td>
</tr>
<tr>
<td>EPI 201 and EPI 202</td>
</tr>
<tr>
<td>EPI 203</td>
</tr>
<tr>
<td>EPI 204</td>
</tr>
<tr>
<td>EPI 207</td>
</tr>
<tr>
<td>EPI 247</td>
</tr>
<tr>
<td>EPI 289</td>
</tr>
<tr>
<td>EPI 507</td>
</tr>
</tbody>
</table>

The second session covers substantive knowledge of epidemiology. Candidates are required to answer 5 questions in topic areas based on the department’s twelve areas of interest. Substantive courses in the department related to the twelve areas of interest serve as the foundation for the content of the questions. Candidates are also encouraged to keep current with important recent developments in the topics they plan to select by regularly reading the major journals.

Procedure of the Examination

The examination is offered once a year in late May. Candidates are asked to notify the Associate Director of Graduate Studies of their intention to sit for the exam prior to spring break. Doctoral students from other departments must request to sit for the exam in writing. Some training grants may require students supported by that grant to answer the substantive questions in that area; students are responsible for meeting this requirement.

The examination is closed book. Calculators are provided for use during the exam. Prior to the exam, copies of previous years’ exams will be available for review. Keep in mind that each year’s exam is different and that previous exams should only be utilized to assist you in taking this type of an exam.

The written examination is graded blindly. Once the exams are graded, the decision of pass or fail of the written exam represents the consensus of the faculty, and may take into account the student’s overall academic performance. The department endeavors to notify students in writing of the results two weeks after the exam.

Any student who fails the written exam is allowed, subsequent to a discussion between the student, the student’s advisor and the Chair, a second and final attempt during the next examination period. The methods and substantive portions are graded separately; students who pass one portion but not the other on the first attempt are only required to retake the portion that they failed. Any student whose performance on the written exam does not show a clear proficiency in the key quantitative and epidemiologic concepts will be closely evaluated during the oral exam.

Non-Epi doctoral students who take and pass the exam must still go through the official, internal application process. Their applications will be reviewed in January with SOPHAS applicants. There is no guarantee of being admitted to the Epidemiology Department based solely on passing the exam.
Data Collection: All doctoral students must have adequate experience in data collection. The data collection requirement is part of the research or tutorial credits. This experience can be collecting the data for their own thesis or for another project, as agreed with the advisor. The goal is to provide a meaningful, practical learning experience (outside of class) but not to impose an undue burden. Examples of data collection projects that fulfill the requirement are:

- Collecting data for a new sub-study or a validation study
- Supervising data collection in an ongoing study
- Developing/documenting a new disease outcome in a cohort study or new exposure in a case-control study
- Conducting the laboratory component of a project
- Designing and distributing a questionnaire
- Linkage of datasets

The Wintersession might be utilized to engage in data collection. Students with previous primary data collection experience might be able to apply this experience towards fulfillment of the requirement (subject to approval of advisor or department chair). Any student with questions regarding whether or not his or her dissertation research fulfills these requirements should check with his or her advisor. A one page description of data collection activities undertaken, or to be undertaken, must be attached to the Oral Exam Scheduling form (see page 22 for further information about Oral Exam Scheduling).

Additional Recommendations

Paper Writing: Students are encouraged to write additional papers even if they are not part of their doctoral thesis. This will strengthen their experience and record of productivity.

All of the usual authorship guidelines hold for students. Thus, if students are paid for work on a project or for data analysis, the resulting paper can still be part of the thesis. One potential difficulty is that students supported on an NIH training grant may work part-time on another NIH-funded project only if that other project is not formally part of their training. This would restrict use of some of that work for the doctoral thesis. Individual consultation with the advisor and training grant PI is clearly important in that situation.

Paying students for analyses does not justify their exclusion as an author if they are otherwise qualified, but authorship is not guaranteed. Payment for work and qualifying for authorship are independent.

Grant Writing: Students are strongly encouraged to gain experience in helping to write one or more grant proposals. Courses and seminars may be available for guidance and are posted on the website.

Presentation Skills: Students are encouraged to present their findings at seminars, and national and international meetings to develop their presentation skills. Courses and seminars may be available for guidance and are posted on the website.
Oral Exam

Prior to taking the Oral Exam, students must complete all course work listed on their final program, but the list need not include all the required courses. It will be appropriate for many doctoral students to avoid listing EPI205 on their final program.

When submitting the final program, students will also provide the nominees for the oral examination committee. Typically, members of the examination committee must hold an HSPH faculty appointment in disciplines representing the major field(s) as well as the minor field(s).

The student's advisor may not serve on the oral examination committee. The advisor may be present during the examination, but may not speak during the examination, and has no vote. At the discretion of the examining committee, the advisor may be invited to participate in the discussion after the examination. Students must complete the oral examination no later than 9 months after passing the written examination. Exceptions will be considered only upon written petition to the department chair.

Oral Exam Thesis Proposal

Before the oral examination, the student distributes a thesis proposal to the committee. The format will vary depending on the student's level of progress at the time. Ordinarily, students should present plans for their principal thesis papers. It is not necessary to present preliminary data. The written thesis proposal should be a draft, or drafts of papers, or a detailed outline for the plans for papers, including background material that would become the introduction to one or more of the papers. The goal is not to produce a finished polished document, but rather a springboard towards advancing the thesis papers, and a starting point for the examination.

Oral Exam and Committee

The Committee on Admissions and Degrees (CAD) appoints the chair of the oral exam committee at the time of the approval of the final program. Upon notification by the Registrar’s office of your committee chair, you must submit an oral exam scheduling form and the attached Data Collection description to the Associate Director of Graduate Studies for departmental approval. The scheduling form, along with your proposal, must be submitted to the Registrar’s office at least 3 weeks prior to the examination date.

Epidemiology students cannot schedule their oral exam until they have passed the departmental written exam. Students can, however, submit their final program and nominate their orals committee if they have completed all of the necessary coursework for the final program.
Research Committee
Upon successful completion of the oral examination, students must nominate the research committee. The research committee may include members of the oral examination committee, but this is not required. The academic advisor serves on the research committee as chair. S/he must hold a primary or secondary appointment in the Epidemiology department. However, members of the research committee may include faculty members outside HSPH.

Doctoral Thesis
The doctoral thesis represents a contribution of knowledge through original scholarly research. Specific thesis requirements and procedures are outlined in detail in the HSPH student handbook. Supplemental guidelines for doctoral candidates are provided below.

Once the Dissertation Scheduling form has been completed and submitted to the Registrar the student’s defense will be advertised across the school and within the Epidemiology Department.

More information about applying for dual degree status can be found here.

Sample Doctor of Science Schedule can be found here.
Doctor of Science Thesis Requirements

The doctoral thesis in the Department of Epidemiology at Harvard School of Public Health should reflect the ability of the student to perform independent, high quality, original epidemiologic research.

**Doctoral Thesis Content:** Normally the thesis consists of at least three high quality original papers for publication (deviations subject to approval of the department chair). These should revolve around some common theme, but need not be closely linked. The goal is to establish expertise in the area under study. One of the thesis papers may be a qualitative or quantitative review paper if this review results in a novel and compelling hypothesis (subject to approval of the thesis committee).

**Doctoral Thesis Completion and Defense Scheduling:**
At least two papers included in the thesis must have been submitted for publication by the time of the defense. The third paper must be in a form ready to submit for publication prior to scheduling the defense. ‘Ready to submit’ means that the content and analysis have been approved by the thesis committee and that the student and the advisor believe the manuscript is ready to be submitted to a journal in its present form. An exception to these requirements may be made for a paper awaiting review by an outside committee (e.g. CDC review) subject to dissertation committee approval.
All thesis committee members must approve all thesis papers before scheduling the defense. To make most efficient use of faculty and student time, no paper should be circulated to the entire committee until a committee member (usually the advisor) has reviewed the draft, and comments have been incorporated. For each paper the faculty requires 2 consecutive weeks for review. Progress from a student’s initial work on the thesis following the Oral Exam through the defense must be, on the whole, linear and steady. Progress mainly clustered in the final months and weeks leading up to the defense will most likely result in postponement of the defense and possibly graduation.

**Authorship on Thesis Papers:** Authorship of the papers to be included in the thesis should be discussed by the faculty advisor and student prior to the start of the thesis. If the student conducts the data analysis and writes the major parts of the paper, the student should be the first author of the paper. Generally, the student will be first author on all three papers included in the doctoral thesis.

**Prior Work as Part of the Thesis:** In select instances work done prior to the written examination, or even before formal entry to the program, can be used as part of the doctoral thesis. To be eligible for consideration as part of the doctoral thesis the prior work must have been done under the supervision of an HSPH Epidemiology Department faculty member. In addition, the student’s doctoral thesis committee must deem the prior work appropriate and unanimously approve its inclusion.
HSPH Interdisciplinary Concentrations

Degree candidates have the option of pursuing interdisciplinary concentrations in which their home departments participate. These concentrations are non-degree programs designed to deepen students’ experience in academic or professional areas aligned with their career goals. Learn more about these concentrations through the Interdisciplinary Concentration webpage.

- Women, Gender and Health
- Epidemiology of Infectious Disease
- Maternal and Child Health/Children, Youth, and Families
- Obesity Epidemiology and Prevention
- Public Health Leadership
- Humanitarian Studies, Ethics, and Human Rights
- Nutrition and Global Health
Section 7

Department Course List

Fall Courses Offered Every Year

Fall
EPI 205 Practice of Epidemiology (2.5 Credits)
EPI 218 Online Practice of Clinical Epidemiology (2.5 Credits) ♦
EPI 242 Seminar in Applied Research in Clinical Epidemiology (1.25 Credits)
ID 200 Principles of Biostatistics and Epidemiology (7.5 Credits)º
ID 537 Obesity Epidemiology (2.5 Credits)º

Fall 1
EPI 201 Introduction to Epidemiology: Methods I (2.5 Credits)
EPI 207 Advanced Epidemiologic Methods (2.5 Credits)
EPI 215 Advanced Topics in Case-Control and Cohort Studies (2.5 Credits)
EPI 217 Epidemiology of Adult Psychiatric Disorders (2.5 Credits)
EPI 221 Pharmacoepidemiology (2.5 Credits)
EPI 249 Molecular Biology for Epidemiologists (2.5 Credits)
EPI 500 Fundamentals of Epidemiology (2.5 Credits)
EPI 515 Measurement Error and Misclassification for Epidemiologists (1.25 Credits)
WGH 211 Women, Gender and Health: Introductory Perspectives (2.5 Credits)

Fall 2
EPI 202 Epidemiologic Methods 2: Elements of Epidemiologic Research (2.5 Credits)
EPI 219 Assessment Concepts and Methods in Psychiatric Epidemiology (2.5 Credits)
EPI 223 Cardiovascular Epidemiology I (2.5 Credits)
EPI 224 Cancer Prevention Fall 2 (2.5 Credits) ◊
EPI 247 Epidemiologic Methods Development - Past and Present (2.5 Credits)
EPI 269 Epidemiological Research in Obstetrics and Gynecology (2.5 Credits)
EPI 501 Dynamics of Infectious Diseases (2.5 Credits)
EPI 507 Genetic Epidemiology (2.5 Credits)
EPI 519 Evolutionary Epidemiology of Infectious Disease (2.5 Credits)

Fall Courses Offered in Even Years (‘14-‘15, ‘16-‘17, etc…)
EPI 257 Advanced Seminar in Cancer Epidemiology (2.5 Credits)
ID520 Advanced Topics in Nutrition and Cancer (1.25 Credits)º
EPI 521 Topics in Medical Device Comparative Effectiveness Research (2.5 Credits)
EPI 255 Epidemiology of HIV, Part I: Etiology, Natural History & Transmission (2.5 Credits)
**Fall Courses Offered in Odd Years** (‘15-'16, ’17-'18, etc…)
EPI 229 Ophthalmic Epidemiology (1.25 Credits)
ID 510 Nutritional Epidemiology of Cancer (2.5 Credits)º
EPI 246 Applied Biomarkers in Cancer Epi (2.5 Credits)

**Epi Related Fall Courses**
ID221 Nutritional Epidemiology II Fall (2.5 Credits)º
ID269 Respiratory Epidemiology Fall 2 (1.25 Credits)º

**Winter Session Courses**
EPI 209 Epidemiologic Methods for Patient Safety and Quality (1.25 Credits)
EPI 271 Propensity Score (1.25 Credit)
EPI 288 Data Mining and Prediction (2.5 Credits)
EPI 293 Analysis of Genetic Association Studies (2.5 Credits)
EPI 502 Biology and Epidemiology of Antibiotic Resistance (2.5 Credits)
EPI 506 Challenges in Latin American Mental Health (2.5 Credits)
EPI 508 Pathology for Epidemiologists (1.25 Credits)
EPI 509 Evidence Based Epidemiology (1.25 Credits) ♦
EPI 510 Global Cancer Epidemiology (1.25 Credits)

**Spring Courses Offered Every Year**

**Spring**
EPI 233 Research Synth & Meta-Analysis (2.5 Credits)
EPI 242 Seminar in Clinical Epidemiology (1.25 Credits)
EPI 245 Cardiovascular Epidemiology II - Reading the Literature (1.25 Credits)

**Spring 1**
EPI 213 Epidemiology of Cancer (2.5 Credits)
EPI 235 Epi Methods in Health Services Research (2.5 Credits)
EPI 289 Models for Causal Inference (2.5 Credits)
EPI 298 Seminars on Comparative Effectiveness and Safety of Therapeutics (2.5 Credits)
EPI 511 Advanced Population & Med Genetics (2.5 Credits)
EPI 517 Issues in Frailty (1.25 Credits)

**Spring 2**
EPI 203 Study Design in Epi Research (2.5 Credits)
EPI 204 Analysis Case-Cont Cohrt Epi Data (2.5 Credits)
EPI 286 Advanced Pharmacoepidemiology (2.5 Credits)
EPI 518 Infections and Cancer (2.5 Credits)
ID 283 Epi Investigation of Social & Enviro Risks for Psychiatric Disorders (2.5 Credits)º
Spring Courses Offered in Even Years (’14-'15, ’16-'17, etc…)
EPI 220 Psychiatric Diagnosis in Clinic and Community Populations (2.5 Credits)
EPI 222 Genetic Epidemiology of Diabetes, Obesity, and Their Complications (2.5 Credits)
EPI 240 Biomarkers in Epidemiology Research (2.5 Credits)
EPI 254 The Epidemiology of Aging (1.25 Credits)
EPI 256 Epidemiology of HIV, Part II: Therapeutic & Prevention Interventions (2.5 Credits)
EPI 284 Epidemiology of Neurologic Diseases (2.5 Credits)
EPI 504 Epidemiology of Disorders and Diseases of Childhood and Young Adulthood (2.5 Credits)

Spring Courses Offered in Odd Years (’15-'16, ’17-'18, etc…)
EPI 206 Prenatal Experience and Brain Development (2.5 Credits)
EPI 260 Mathematical Modeling of Infectious Diseases (2.5 Credits)
EPI 270 Advanced Reprod. Epidemiology (1.5 Credits)
ID 542 Methods for Mediation and Interaction (2.5 Credits)

Epi Related Spring Courses
ID 206 Scientific Writing in Nutrition and Epidemiology Spring (2.5 Credits)
ID 214 Nutritional Epidemiology Spring (2.5 Credits)°
ID 215 Environmental and Occupational Epidemiology Spring (2.5 Credits)°
ID 236 Social Epidemiology Spring 2 (2.5 Credits)°
ID 271 Advanced Regression for Environmental Epidemiology Spring 1 (2.5 Credits)
ID 540 Life Course Epidemiology Spring 1 (2.5 Credits)
WGH 207 Advanced Topics in Women, Gender and Health Spring 2 (1.25 Credits) ♦
NUT 214 Policies for Global Cardiovascular and Metabolic Health: Translating Knowledge into Action Spring 2 (2.5 Credits)

Summer Courses
Summer
EPI 208 Intro Clinical Epidemiology (5 Credits)

Summer 1
EPI 236 Analytical Clinical Epi (5 Credits)
EPI 500 - Fundamentals of Epidemiology (2.5 Credits)

Summer 2
EPI 202 Epidemiologic Methods 2: Elements of Epidemiologic Research (2.5 Credits)
EPI 210 Study Design in Clinical Epidemiology (2.5 Credits)
EPI 505 - Epi Methods for Global Health (2.5 Credits)

Epi Related Summer Courses
ID 215 Environmental and Occupational Epidemiology (2.5 Credits)°

Course Description Key
° ID Courses that may be used to fulfill Epi substantive credits
♦ Pass/Fail Grading Option Only

The most current course schedules by semester/department can be found here.
General Information Page 28
Epidemiology Department Student Advisory Committee

This student committee was formed to serve as a liaison with the Chair of the Department and the Associate Director of Graduate Studies. The goals of the committee are to provide feedback and to discuss relevant issues on behalf of the EPI student body. The committee consists of representatives from each degree program. Members of the committee, with the exception of SM1 students, will serve for a 2-year period.

Please feel free to bring any concerns that you would like addressed by the Student Advisory Committee to the Chair of the Department, the Associate Director of Graduate Studies or any of the student representatives. Students interested in serving on the committee should submit their names to any current SAC member, the Epi Graduate Studies Coordinator or the Associate Director of Graduate Studies.

The Epidemiology Peer Mentor Buddy System

Each year new students to the two-year masters and doctoral programs are paired with a current student who take time to answer questions and assist with concerns related to the new student’s academic career. Peer mentors provide guidance as new students become acclimated to the HSPH environment. These student pairs are encouraged to maintain communication and participate in department social events throughout the year. Contact the Associate Director of Graduate Studies for more information.

HSPH Student Government

The Student Coordinating Committee (SCC) is the Harvard School of Public Health's student government. SCC works closely with faculty and administration on important school-wide issues. The Student Government also organizes and sponsors social, educational, and community service events. Visit their webpage to learn how you too can become involved!

The Green Team

The Department of Epidemiology is interested in energy conservation and ecological preservation. A small committee is coordinated each year and participates in events to raise money, as well as awareness. The general expectations would be coming to a monthly meeting (when possible) and volunteering occasionally for events (helping people compost, etc.) Students interested in joining the committee can contact David Havelick, Program Manager, Cancer Epidemiology, HSPH Department of Epidemiology.

More information on the school’s student government can be found here.

For the most recent edition the Department Newsletter EpiCenter, click here.
Department Resources

Every effort is made to provide Epidemiology students with physical and academic resources to support academic goals. We strive to make your time in this department and enriching and rewarding experience.

The **EpiCenter** Newsletter

The engaging Epidemiology Department Newsletter is a resource for applicants, students, alumni and faculty to stay up-to-date on current activities, awards, and epidemiology-related news. All are invited to submit news of interest to Kate Becker, Graduate Studies Coordinator and Communications Committee Chair.

**Copying/Fax/Scanning**

Copy, Fax and Scanning capability is provided on a very limited basis in the department. Large print jobs should be sent to the print shop so the machine is available during office hours. Students can check with the Office Manager for usage.

**Copyright and Reproduction of Articles/Publications for research conducted on campus**

Students are advised to comply with all school policies regarding copying of articles and journal publications whether they are published on or off-campus.

**Mailboxes and Communication**

Epidemiology doctoral and 80 credit masters students who are here for two years or more, are allocated mailboxes in the department, in addition to the mailboxes allocated by HSPH on the ground floor in Kresge.

HSPH e-mail addresses will be used for communication from the Epidemiology department as well as regular mail. Students are responsible for checking all allocated mailboxes and e-mail for information.

**Desk Space for Doctoral Students**

Desk Space, in Kresge rooms 906 and 911, is currently assigned to doctoral and post-doctoral students on a first come-first served basis. Doctoral students will only be considered after passing the departmental written exam. Desks usually become available when students graduate or find alternative arrangements.

**Graduate School Funding**

The Epidemiology Department can assist new and current students with inquiries about departmental and training grant funding opportunities. Inquiries about loans, scholarships and awards can be directed to the Office of Student Financial Services.

**Room Reservations**

Epidemiology students are welcome to use the library (Kresge, Room 907) and the faculty suite (Kresge, Room 902) for group meetings or study sessions. Both must be reserved in advance by calling 617 432 1050. Students may contact the Office Manager, Jessica Bugg for more information.
Alumni Services

Alumni are valuable to the department and are invited to stay connected to the department and faculty. During the graduation process, the department invites your feedback concerning our curriculum, as well as your overall experience in the department through a survey. Career support and advice is available through the alumni portal at the Office of Student Services.

Post-Doctoral Services

Post-Doctoral Fellows and Researchers are a vital part of our department’s success. Post-doctoral research fellows are trainees working in an apprenticeship mode in preparation for a career as scientific professionals. Post-doctoral fellows are provided with mentors and assume responsibility for the development of their research and careers. Upon seeking advice of the mentor and other faculty members, fellows perform required research.

HSPH Student-Community Action Partnership

Interested in exploring, working and taking action with Boston communities on health and social justice-related issues? HSPH S-CAP is committed to increasing the presence of HSPH in the surrounding Boston area and engaging with social justice issues which impact local communities, especially those affecting health. Contact hsph.scap@gmail.com to become involved.

Student Life at HSPH

Many academic, cultural, and social activities take place for students at the school, at Harvard and in Boston. Please explore the HSPH Student Life Webpage to find out what’s going on in our community.

Staying connected

Alumni, Post-Doctoral Researchers associated with the Epidemiology department as well as the School of Public Health, are encouraged to stay connected to the department by:

- **Volunteering time** to speak with prospective applicants about your experiences
- Sharing your research and experiences at scheduled seminars and workshops
- Applying for pre/post doctoral fellowships and training grants- Fellowships and Funding
- Contributing to the departmental newsletter EpiCenter
- Keeping us informed of your research and career achievements- Contact Us
- Updating your contact information to stay tuned on job and funding opportunities Contact Us