HARVARD T.H. CHAN | SCHOOL OF PUBLIC HEALTH

Department of Epidemiology

Student Handbook
2015-2016

Harvard School of Public Health

Department of Epidemiology

677 Huntington Avenue
Boston, MA 02115

Telephone 617-432-1055
Fax 617-566-7805

Website www.hsph.harvard.edu
Email epidept@hsph.harvard.edu

For a map of the Longwood Medical area click here.

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

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

Mrs. Ellen Furxhi
Assistant Director of Graduate Studies
Phone: 617.432.1055
E-mail: elfurxhi@hsph.harvard.edu

Mr. Eric DiGiovanni
Graduate Studies Coordinator
Phone: 617.432.1328
Email: edigiova@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

Epidemiology at the Harvard T.H. Chan School of Public Health

Leadership for a new century

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 2015-16

Academic Dates 2015-16

Summer 2015	Fall 2015	Spring 2016
July 1-August 14	*September 2-December 18*	*January 4-May 13*
Summer 1	**Fall 1**	**WinterSession**
July 1-July 24	*September 2-October 23*	*January 4-January 22*
Summer 2	**Fall 2**	**Spring 1**
July 27-August 14	*October 26-December 18*	*January 25-March 11*
		Spring 2
		March 21-May 13

The most current and complete academic calendar can be found here.

Holidays and Events

Summer 2015	Fall 2015	Spring 2016
Tuesday, July 1-SM-1 Summer student orientation	Monday, September 7-Labor Day	Monday, January 18-Martin Luther King Day
Friday, July 3-Independence Day (observed)	Monday, October 12-Columbus Day	Monday, February 15 President's Day
Monday, August 24-Friday, August 28-New Student Orientation	Tuesday, November 11 Veterans Day	Monday, March 14-Friday, March 18 Spring Recess
	November 25/27-Thanksgiving Recess	TBA-Cutter Lecture
	Wednesday, December 2-Trichopoulos Symposium	Thursday, May 26 - Commencement
	Monday, December 21-Friday, January 1 Winter Recess	

For more information regarding the Epidemiology Seminar Series, click here

Degree Candidacy Dates

For Diploma Date	Degree Applications Due	Dissertations Due
November 10, 2015	September 4, 2015	September 25, 2015
March 8, 2016	January 4, 2016	January 15, 2016
May 25, 2016	February 5, 2016	April 22, 2016

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Section One General Academic Information

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 Doctoral Students

Epidemiology doctoral students have the option to complete requirements for the Master of Science or Master of Public Health degree (while pursuing a Doctor of Science degree). Students must submit a completed General Petition Form to the Admissions Office to apply. Once approved, students also submit an Application Form, two new letters of recommendation, and a statement of purpose. Students will be notified of the department decision by the Office of Admissions.

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.
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.

Admission to the Master 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 Assistant Director of Graduate Studies). This form should be submitted to the Assistant 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 Assistant 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 Assistant 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 Assistant 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 Assistant 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 Assistant 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 Harvard Chan 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 or the Summer Session for Public Health Studies.

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.

Starting Program with	Program in Clinical Effectiveness	Summer Session in Public Health Studies
Intro Epi (Year 1)	EPI208 (5 credits)	EPI500 (2.5 credits) EPI202 (2.5 credits)
Intro Biostat (Year 1)	BIO206 (2.5 credits) BIO208 (2.5 credits)	BIO 202 (2.5 credits) BIO 203 (2.5 credits)
Advanced Epi (Year 2)	EPI236 (5 credits) EPI210 (2.5 credits)	EPI236 (5 credits) EPI210 (2.5 credits)
Additional Requirements (Year 1 and/or Year 2)	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)	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)
Thesis Requirement (Year 1 and Year 2)	EPI315 (5 – 12.5)	EPI315 (5 – 12.5)
Electives (Year 1 and Year 2)	10 to 17.5 credits	10 to 17.5 credits

Credit Requirement Note: Students must earn a minimum of 30 **ordinal** credits in order to graduate.

Electives

Elective courses can be chosen from any course offered in the Summer Session or the WinterSession at HSPH. Students in the Summer-Only, 42.5 credit Master of Science Program are not allowed to take courses at the Harvard Chan School during the Fall or Spring semesters except for select online options.

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 the Harvard Chan School. 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 45 Credit Master of Public Health in Epidemiology

Introduction

The Harvard Master of Public Health in Epidemiology (MPH-EPI) Program combines the broad based competency training in core areas of Public Health with rigorous training in epidemiologic methods and applications. The MPH-EPI Program is a 45-credit program with one-third of the credits earned on campus and two-thirds of the credits earned online and in the field. The two-year schedule and online format allows students to complete a mentored and student-initiated MPH Practicum at their home site. Students in this program benefit from three modes of training:

On Campus
Online
In the Field

On Campus Training provides traditional face-to-face learning from Harvard faculty during three brief periods. Structured exercises provide the basis for team building and peer education among the students. Online Training provides the flexibility for students to learn on their own schedule and at their selected pace. Discussion forums, group exercises, and scheduled web-based, video conferences provide the basis for continued interaction among students and faculty**.** In the Field Training provides the opportunity to apply skills obtained from on campus and online training to address a public health issue of interest, selected by the student, and under the mentoring supervision of a Harvard faculty member.

Through a series of required methods courses during the first year of the program, students in this program will have the same in-depth training in Epidemiology as the department's 42.5 Master of Science in Epidemiology. Required Public Health Core Courses offered at the beginning of the second year provide the required core breadth of training for the Masters of Public Health Program at this school. Limited Elective Courses offered during the second year of this program provide the students additional training in targeted areas of interest to the students. Students initiate MPH practicum by the end of the first year, complete the practicum during the second year, and present the results of the practicum at the end of the second year of this program.

Online instruction will include both asynchronous and synchronous formats. The asynchronous format allows students to view lecture videos and complete exercises on their own schedules. The synchronous component of each course utilizes scheduled small group workshops and assignments, mentored by faculty.

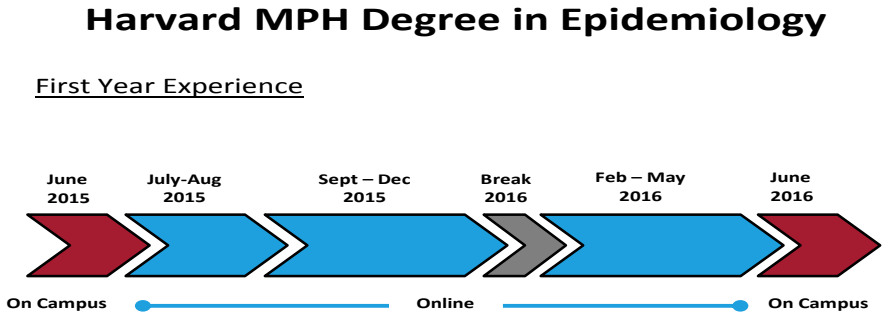
Master of Public Health in Epidemiology Competencies

At the end of the program students will be able to:

- Demonstrate the basic skills in the core fields of Public Health that pertain to the school's Master of Public Health Program.
- Develop a comprehensive knowledge about the role of Epidemiology as a core field of Public Health, interpret descriptive epidemiologic results, evaluate and design valid and efficient protocols to investigate Public Health and clinical problems that pertain to the department's 42.5 Master of Science in Epidemiology Program.

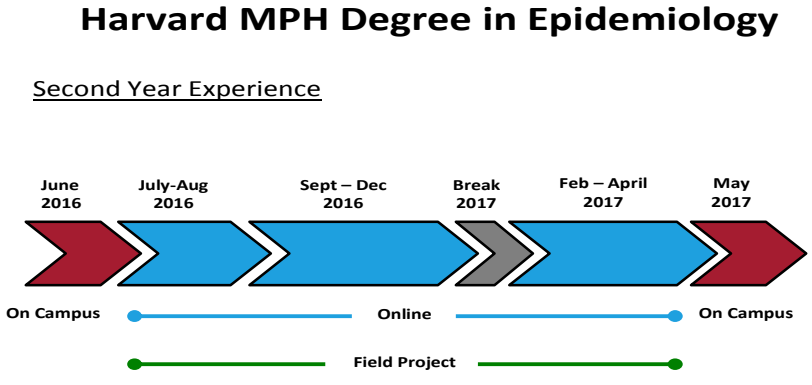
Schedule

Students in the MPH-EPI Program initiate their training during an intensive three-week onsite period in June of Year 1, where students take an integrated course introducing the basics of Epidemiology and Biostatistics. This course is extended with an online component during the subsequent summer period. During the fall semester students continue their training in epidemiologic methods with a course on analytic methods. In the spring semester students complete their training in core epidemiologic methods by taking half-semester courses in study design and causal inference.



The second year of this program (Year 2) begins with a second intensive three-week onsite training program in June addressing the remaining required core competencies of Public Health. This course is extended with an online component during the subsequent summer period. Online Elective Courses follow during the subsequent fall and spring semesters.

The program ends with a two-week onsite program in May when each student presents the results of his/her completed MPH Practicum to faculty and fellow students in time for the May graduation date.



Sample Curriculum

Year 1	Course	Credits	Location
June	Introduction to Epidemiology and Biostatistics (ID207)	7.5	Onsite
Summer	Introduction to Epidemiology and Biostatistics (ID207) (continued)	2.5	Online
Fall	Analytic Methods for Epidemiology (EPI522)	5.0	Online
Spring	Study Design for Epidemiology Causal Inference for Epidemiology	2.5 2.5	Online Online
Year 2			
June	Public Health Core	7.5	Onsite
Summer	Public Health Core (continued)	2.5	Online
Fall	Elective Course Elective Course	2.5 2.5	Online Online
Spring	Elective Course Elective Course	2.5 2.5	Online Online
May 2017	MPH Practicum Presentation	5.0	Onsite

MPH-EPI Practicum

Each student is required to complete a supervised MPH-EPI Practicum on a topic selected by the student. An advantage of a partially online MPH Program is the potential for students to initiate and complete a student-identified practicum at their home site, often under the supervision of a local mentor during a two-year period. However, each practicum will be supervised by Harvard faculty members using group mentoring activities during Year1 and individual mentoring during Year2.

Members of the MPH-EPI Practicum Committee (MPH-EPI-PC) meet individually with students during the first on-campus session in June and work as group mentors for small group online sessions during Year1. Students are assigned to small groups to meet with the MPH-EPI-PC in online session during the first year to develop a protocol for a MPH Practicum. Once developed, the MPH-EPI-PC identifies the Harvard Practicum Supervisor from the faculty in the Department of Epidemiology to mentor the student's MPH-EPI Practicum during Year2.

Practicum Schedule

Pre-Matriculation (Spring)	Newly accepted students are invited to submit a one-page description of a topic for a potential MPH-EPI Practicum
June Year1 (on-campus)	Initial development of protocol for a MPH Practicum via Small Group Workshops and Office Hours Sessions
Summer, Fall, Spring Year1 (online)	Students work in small groups under the guidance of the MPH-EPI-PC to develop protocols for MPH Practica. Once developed, the MPH-EPI-PC identifies a faculty member from the Department of Epidemiology to be the Practicum Supervisor
June, Year2 (on-campus)	Student meets with Practicum Supervisor who provides modifications to the protocol and specifies a schedule for completing the Practicum during Year2
Year2 (online)	Student completes Practicum under supervision of Practicum Supervisor
May, Year2 (on-campus)	Student presents results of Practicum in an oral or poster session (Culminating Experience)

Section Four 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 Harvard Chan 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	
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)
BIO 201	Introduction to Statistical Methods (5)
BIO 210 or 213	Analysis of Rates and Proportions (5) or Applied Regression for Clinical Research (5)
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.

Academic Year, 42.5 Credit Master of Science Sample Schedule		
Fall Semester		
EPI 201	Introduction to Epidemiology	Fall I
EPI 202	Elements of Epidemiologic Research	Fall II
BIO 201	Introduction to Statistical Methods	Fall
Electives	10-12.5 Credits	
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 Five

60 Credit Master of Science Program in Computational Biology and Quantitative Genetics

The Master's Degree Program in Computational Biology and Quantitative Genetics (CBQG) is designed for students seeking both theoretical and practical training in the quantitative analysis and interpretation of large-scale, public health genomic data.

STUDENTS WILL RECEIVE TRAINING IN QUANTITATIVE METHODS, INCLUDING:

- linear and logistic regression
- survival analysis
- longitudinal data analysis
- statistical computing
- clinical trials
- statistical consultation and collaboration
- epidemiology

STUDENTS WILL ALSO GAIN A STRONG FOUNDATION IN:

- modern molecular biology and genetics
- computer programming
- the use and application of tools for analysis of genomic data
- methods for integrative analysis
- meta-analysis of genes and gene function

The program, which is typically completed within 18-24 months, requires a minimum of 60 credits of course work and a supervised 20-credit Collaborative Research Thesis. The Collaborative Research Thesis is carried out at selected research institutions where trainees will have access to mentoring by experienced quantitative scientists with expertise in the analysis of genomic data. The thesis is presented in both oral and written form before a committee consisting of the thesis advisor and two additional program faculty.

For more detailed curriculum and academic information regarding this degree please see the CBQG Student Handbook.

Section Six **80 Credit Master of Science Program**

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 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 Assistant 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 It is suggested that a draft of the thesis be submitted to the reader by the beginning of the Spring 2 term in order to allow time for review and revisions. This is only meant to be a guideline. The student and reader may develop an alternate timeline if that seems appropriate. If the advisor is not the reader, the reader's comments on the thesis must be submitted to the advisor. The thesis and approval form must be submitted to the Assistant Director of Graduate Studies, electronically or in hard copy, by the final day of Spring semester classes.

80 Credit Master 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 289	Causal Inference (2.5)
EPI 507	Genetic Epidemiology (2.5)
BIO 201	Introduction to Statistical Methods (5)
BIO 210 or	Analysis of Rates and Proportion (5) or
BIO 213	Applied Regression for Clinical Research (5)
	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		
EPI 201	Introduction to Epidemiology (2.5)	Fall I
EPI 202	Elements of Epidemiologic Research (2.5)	Fall II
BIO 201	Introduction to Statistical Research (5)	Fall
Electives	10 Credits	
Spring Semester		
EPI 204	Analysis of Case-Control and Cohort Studies (2.5)	Spring I
EPI 289	Causal Inference (2.5)	Spring I
EPI 203	Study Design in Epidemiologic Research (2.5)	Spring II
BIO 210	Analysis of Rates and Proportion (5)	Spring
Electives	7.5 credits	Spring
THESIS	Begin work on topic/research	Spring
Year Two | Fall Semester		
EPI 507	Genetic Epidemiology (2.5)	Fall II
Electives	17.5 credits	Fall
THESIS	Work on thesis	Fall
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 Assistant 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. A timeline for submitting drafts and revisions of the thesis should be agreed upon by the advisor, or another Harvard faculty member whom the student and the advisor agree to designate as reader. The finished thesis must be approved by the advisor or reader and submitted to the Assistant 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 an Independent Study (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 Seven

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—Required Courses

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 General Credit Requirements

10	Substantive Epi Credits (*these could overlap with the ordinal credit requirements below*)
40	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		
EPI 201	Introduction to Epidemiology (2.5)	Fall 1
EPI 202	Elements of Epidemiologic Research (2.5)	Fall 2
BIO 201	Introduction to Statistical Research (5)	Fall
EH 205	Human Physiology (5)	Fall
Electives	5 Credits	Fall
Spring Semester		
EPI 289	Causal Inference (2.5)	Spring 1
EPI 204	Analysis of Case-Control and Cohort Studies (2.5)	Spring 2
EPI 203	Study Design in Epidemiologic Research (2.5)	Spring 2
BIO 210	Analysis of Rates and Proportion (5)	Spring
EH 208	Pathophysiology of Human Disease (5)	Spring
PROGRAM	Submit Prospective Program Form	End of 2nd Semester *
Year Two | Fall Semester		
EPI 207	Advanced Epidemiologic Methods (2.5)	Fall 1
EPI 247	Epidemiologic Methods Development –Past/Present (2.5)	Fall 2
EPI 507	Genetic Epidemiology (2.5)	Fall 2
Electives	10 Credits	Fall
Spring Semester		
BIO 226	Applied Longitudinal Analysis (5)	Spring
Electives	20 credits	Spring
WRITTEN EXAM	Preparation for Written Exam/Take Written Exam	Spring
THESIS	Begin work on Research	Spring
Year Three | Fall Semester		
EPI 205	Practice of Epidemiology (2.5)	Fall
Electives	17.5 credits	Fall
PROGRAM	Submit Final Program Form by the end of Fall semester	TBA
PROGRAM	Final Program and Chair of the Oral Exam Committee is approved	TBA
Spring Semester		
Electives	20 credits (including credit for thesis)	Spring
ORAL EXAM	Submit Oral Qualifying Exam Scheduling Form 3 weeks before you wish to take the exam	TBA
DEFENSE	After the Oral Exam, nominate the research committee	TBA
Years Four and Five		
EPI 350	20 credits of research and Thesis work	TBA
DISSERTATION DEFENSE	Schedule Dissertation Defense (End of 5th year for Full-Timers, end of 7th year for Part-Timers)	TBA

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: _____

Please Check One:
- ☐ Prospective Program
- ☒ Final Program
- ☐ Prospective/Final Program

Advisor: George Seage

Major Field Title: _____

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

Total Credits: 20

Minor Field 1 or Major Field 2: Infectious Disease Epi

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

Total Credits: 10

Minor Field 2: Biostatistics

Course Code	Course Title	Credit Units	Grade	Semester/Year
BIO 210	Rates and Proportions	5	A	Spring/2013
BIO 223	Survival Analysis	5	A	Spring/2014

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 _____

☒ EPI201a, Semester and Year Fall 1/2012

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):	Nominee Will Examine in:
Faculty 1	Epidemiology
Faculty 2	Infectious Disease Epi
Faculty 3	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.
_____ has been appointed Chair of your Examining Committee.

☐ 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:

Courses to complete before attempting the Written Exam	
BIO 201	EPI 204
BIO 210 or BIO 213	EPI 207
BIO 223 or BIO226	EPI 247
EPI 201 and EPI 202	EPI 289
EPI 203	EPI 507

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 Assistant 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 Assistant 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.

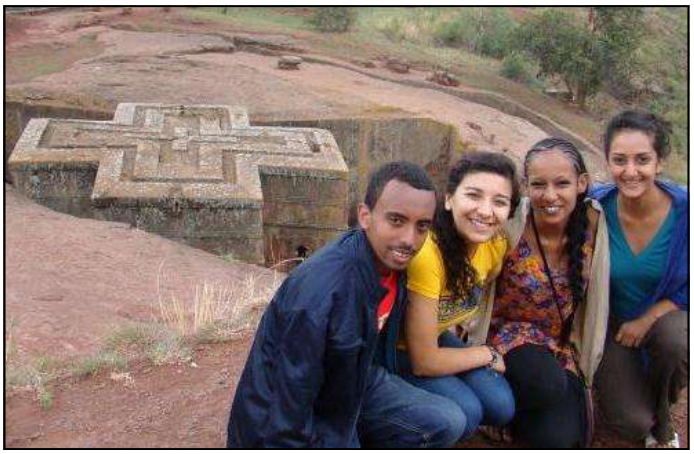
Section Eight

Interdisciplinary Concentrations

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 Nine **Department Course Listing**

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

Fall Courses Offered Every Year

Fall

EPI 205 Practice of Epidemiology (2.5 Credits)
EPI 315 Research: Clinical Epidemiology (5— 12.5 Credits)
EPI 242 Seminar in Applied Research in Clinical Epidemiology (1.25 Credits)
??? Integrated Epi/Bio course (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 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 286 Advanced Pharmacoepidemiology (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 ('16-'17,'18-'19, 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 227 Child Psych Epi (1.25 Credits)

EPI 230 Religion and Public Health(1.25 Credit, EOY even)

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, EOY odd)

EPI 506 Challenges in Latin American Mental Health (2.5 Credits)

EPI 508 Pathology for Epidemiologists (1.25 Credits, EOY even)

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 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 231 Readings in Global Health (1.25 Credits)

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)
EPI 518 Infections and Cancer (2.5 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)º
ID 215 Environmental and Occupational Epidemiology Spring (2.5 Credits)º
ID 236 Social Epidemiology Spring 2 (2.5 Credits)º
ID 271 Advanced Regression for Environmental 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 210 Study Design in Clinical Epidemiology (2.5 Credits)
EPI 236 Analytical Clinical Epi (5 Credits)
EPI 500 - Fundamentals of Epidemiology (2.5 Credits)
EPI 505 - Epi Methods for Global Health (2.5 Credits)

Summer 2

EPI 202 Epidemiologic Methods 2: Elements of Epidemiologic Research (2.5 Credits)
EPI 253 Effectiveness Research with Longitudinal Healthcare Databases (2.5 Credits)

Epi Related Summer Courses

ID 215 Environmental and Occupational Epidemiology (2.5 Credits)º

Student Resources and Information

Epidemiology Department Student Advisory Committee

This student committee was formed to serve as a liaison with the Chair of the Department and the Assistant 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.

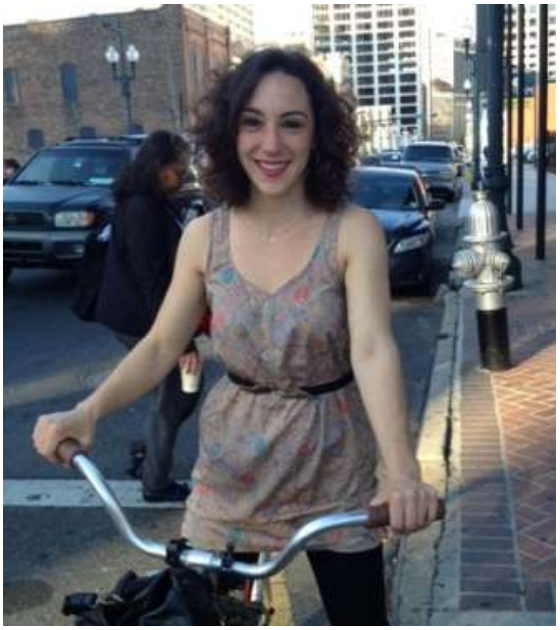
Please feel free to bring any concerns that you would like addressed by the Student Advisory Committee to the Chair of the Department, the Assistant Director of Graduate Studies or any of the student representatives. Students interested in serving on the committee should submit their names to any current SAC member, the Epi Graduate Studies Coordinator or the Assistant 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 Assistant 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 Eric DiGiovanni, 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) for group meetings or study sessions. Reservation can be made in advance by calling 617.432.1050. Students may contact the Office Manager, Zennon Black 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 the Harvard Chan School 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