HARVARD SCHOOL OF PUBLIC HEALTH

Department of Epidemiology

Student Handbook 2010-11

Harvard School of Public Health

Department of Epidemiology

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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 Official Register and the departmental handbook.

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

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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 School of Public Health

Epidemiology, the study of the frequency distribution, and determinants of disease in humans, is a fundamental science of public health. Epidemiologists use many approaches, but the ultimate aim of epidemiologic research is the prevention of human disease.

Epidemiology has been a part of the public health studies at the Harvard School of Public Health since 1958. Three of the four previous department chairpersons are still active in the department, and the current chairperson, Dr Hans-Olov Adami, is also affiliated with the Karolinska Institutet in Sweden.

The Department of Epidemiology is considered the largest department within the school in terms of the number of faculty, students and research support, including over 100 faculty and researchers. The department works closely with other school departments, however special relationships with Biostatistics and Nutrition were developed to promote training opportunities, teaching and research. The department has active research grants supporting pre-doctoral and post-doctoral students, as well as faculty.

The department has become known for the numerous cohort studies and population studies conducted, the most notable being the Nurses' Health Study (parts I, II). Other studies include: the Health Professionals Follow Up study (1986), the Growing Up Today Study (1996), Physician's Health Study (1982), and the Woman's Health Study (1993) which all helped expand research from prevention trials to resource for observational study.

The curriculum within the department includes over 70 courses alone, a combination of core, methods, substantive, and seminar type courses. The department is surrounded by a rich academic environment not only at the School of Public Health, but in close proximity to the Harvard Medical and Dental Schools. The Longwood Medical Area community boasts many research laboratories, teaching hospitals and professionals investigating various topics.

Students attend Harvard University from all over the world, and so our Epidemiologic studies have become global too. Globalization has only encouraged the department to initiate cohort studies in Africa (Tanzania, Nigeria, South Africa, Uganda), Asia (China) and Europe (Scandanavia).

The department has a tradition of teaching excellence awards and community recognition. Graduates of our Masters and Doctoral programs, when surveyed, consistently report that they are well-trained for the workforce and are recognized as leaders in their field. They find employment in academia, research organizations, private and public organizations, and international agencies.

Important Dates 2010-11

Academic Dates 2010-11

Summer 2010	Fall 2010	Spring 2011
July 2-August 13	*September 1-December 17*	*January 3-May 13*
Summer 1	**Fall 1**	**WinterSession**
July 2-July 23	*September 1-October 22*	*January 3-January 21*
Summer 2	**Fall 2**	**Spring 1**
July 26-August 13	*October 25-December 17*	*January 24-March 11*
		Spring 2
		March 21-May 13

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

Holidays and Events

Summer 2010	Fall 2010	Spring 2010
July 1st-MS-1 Information Session	Monday September 6-Labor Day	Monday January 17-Martin Luther King Day
Monday July 5-Independence Day	Saturday September 18th New Student Welcoming Event	Monday February 21-President's Day
Wednesday August 25-Tuesday August 31-New Student Orientation	Monday October 11-Columbus Day	Monday March 14-Friday March 18 Spring Recess
	Thursday November 11 Veterans Day	TBA-Cutter Lecture
	Thursday November 25/26-Thanksgiving Recess	Thursday May 26-Commencement
	TBA-Cutter Lecture	
	Monday December 20-Friday December 31 Winter Recess	

For more information regarding the Epidemiology Seminar Series, click here

Degree Candidacy Dates

For Diploma Date	Degree Applications Due	Dissertations Due
November 2010	September 10, 2010	October 1, 2010
March 2011	January 7, 2011	January 21, 2011
May 2011	February 18, 2011	May 2, 2011

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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 a completed General Petition Form to the Admissions Office to apply. Once approved, students submit an 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. 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 (EPI200 or EPI201): Epidemiology students wishing to waive either EPI200 or EPI201 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 Academic Services Coordinator 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. However, 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 Epidemiology department). 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 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 Contracts/Tutorials (EPI 300)

An independent study contract/tutorial signifies 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. To ensure monitoring of proper and timely completion of the independent work, a signed copy of the contract must be submitted to the Assistant Director of Graduate Studies. A student may also register for credit while preparing for the written exam. Visit here for more information.

Teaching Assistant Experience

Doctoral students are strongly encouraged to gain teaching experience by serving as a teaching assistant. 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 Aging, Cardiovascular Epidemiology, Cancer Epidemiology, Molecular and Genetic Epidemiology, Environmental and Occupational Epidemiology, Reproductive Epidemiology and Nutritional Epidemiology of Cancer. These fellowships are currently 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 and administration 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

The Summer only, 42.5 credit SM is designed primarily for clinicians and other health care professionals who wish to develop the quantitative and analytic skills needed for clinical research. 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 with 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.

Requirements for the Master of Science One Year Summer Only Program

Master of Science Program in Clinical Effectiveness	Master of Science Session in Public Health Studies
EPI 208	EPI 500
BIO 206	EPI 202
BIO 207 or BIO 208 or BIO 209	BIO 202
EPI 236	BIO 203
EPI 202 or BIO 214 Or EPI 295	EPI 236
BIO 224 or BIO 501	BIO 214 or EPI 295
EPI 315 (5-12.5 cr)	BIO 224 or BIO 501
Electives (10-17.5 cr)	EPI 315 (5-12.5 cr)
Total 42.5 credits	Electives (10-17.5 cr)
	Total 42.5 credits

Electives

Elective courses can be chosen from any course offered in the Summer Session or the Winter-Session at HSPH. Students in the Summer-Only, 42.5 credit Master of Science Program are not allowed to take courses at HSPH during the Fall or Spring semesters.

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.

Sample Schedules for Students Entering the Master of Science Degree

Master of Science | Entry from the Clinical Effectiveness Program		
Year One		
EPI 208	Introduction to Clinical Epi (5)	Summer I, II
BIO 206	Introductory Statistics for Medical Research (2.5)	Summer I
BIO 207 or BIO 208 or BIO 209	Statistics for Medical Research II or Statistics for Medical Research Advanced or Statistics for Medical Research, Translational (2.5)	Summer II
Electives	(5)	Summer I, II
Year Two		
EPI 236	Analytical Aspects in Clinical Epidemiology (5)	Summer I
EPI 202 or BIO 214 or BIO 295	Elements of Epidemiologic Research (2.5) Principles of Clinical Trials or Pharmacoepidemiology: an Introduction (2.5)	Summer II
BIO 224 or BIO 501	Survival Methods in Clinical Research or Linear and Longitudinal Regression (2.5)	Summer II
Electives	(5)	Summer I, II
	Program Total	**42.5 cr**

Master of Science | Entry from the Public Health Studies Program		
Year One		
EPI 500	Fundamentals of Epidemiology (2.5)	Summer I
BIO 202	Principles of Biostatistics I (2.5)	Summer I
EPI 202	Elements of Epidemiologic Research (2.5)	Summer II
BIO 203	Principles of Biostatistics II (2.5)	Summer II
Year Two		
EPI 236	Analytical Aspects in Clinical Epidemiology (5)	Summer I
BIO 214 or EPI 295	Principles of Clinical Trials or Pharmacoepidemiology: an Introduction (2.5)	Summer II
BIO 224 or BIO 501	Survival Methods in Clinical Research or Linear and Longitudinal Regression (2.5)	Summer II
Electives	(5)	Summer I, II
Year Three		
Electives	(5)	Summer I,II
	Program Total	**42.5 cr**
**The second year of course work can be done part-time over 2 consecutive summers.*		

More information about the Summer Program Degree Plan can be found here.

Section Three 42.5 Credit Master of Science Program (Academic Year)

Introduction

The Academic Year, 42.5 credit SM provides students with basic skills in epidemiologic and quantitative methods in computing, in preparation for research or academic careers. This degree program is open to applicants with a medical degree or master's-level background in biology.

Course Completion

When pursuing the Academic Year, 42.5 credit Master of Science degree, students typically begin in the Fall semester, although beginning in the summer session is also possible. 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	
EPI 201 *	Introduction to Epidemiology (2.5)
EPI 202	Elements of 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)
Strongly Recommended Courses	
EPI 203	Study Design in Epidemiologic Research (2.5)
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.

Academic Year, 42.5 Credit Master of Science Suggested 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 Credits in Area of Interest	
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 Credits in Area of Interest	Spring

Section Four *80 Credit Master of Science Program*

Introduction

The 80 credit master's degree program is typically completed over two academic years and provides students with basic skills in epidemiologic and quantitative methods as well as computing, in preparation for research and academic careers. This degree program is primarily intended for students who expect to continue toward a doctoral degree. It is designed for individuals who hold a bachelor's degree and have a strong background in biology and mathematics. In addition to epidemiology and statistics courses, students study the basic medical sciences and the biological aspects of public health problems.

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.

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. Master's candidates who apply and matriculate in the EPI doctoral program can utilize the master's thesis as one of their doctoral thesis papers. 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 must 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 by the beginning of the quarter preceding graduation, and it must be accepted by the advisor, or by another Harvard faculty member whom the student and the advisor agree to designate as reader.

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 by failing to meet the deadline.

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. The submission may be sent via e-mail and should be submitted before the end of the Fall 1 term. The Chair will send an e-mail of approval or disapproval of the topic.

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 Assistant Director of Graduate Studies by May 13, 2011.

80 Credit Master of Science Requirements	
EPI 201	Introduction to Epidemiology (2.5)
EPI 202	Elements of 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 203	Study Design in Epidemiologic Research (2.5)
EPI 215	Advanced Topics in Case-Control and Cohort Studies (2.5)
Recommended Non-Epidemiology Courses	
BIO 210	Analysis of Rates and Proportion (5)
BIO 211	Regression and Analysis of Variance in Experimental Research (5)
BIO 213	Applied Regression for Clinical Research (5)
BIO 222	Basics of Statistical Inference (5)
BIO 223	Applied Survival Analysis & Discrete Data (5)
BIO 226	Applied Longitudinal Analysis (5)
EH 205	Human Physiology (5)
EH 504	Principles of Toxicology (2.5)
EH 208	Pathology of Human Disease (2.5)
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 | Suggested 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 in Area of Interest	
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 in Area of Interest	Spring
THESIS	Begin work on Topic/Research	Spring
Year Two | Fall Semester		
EPI 507	Genetic Epidemiology (2.5)	Fall II
EPI 215	*Advanced Topics in the Analysis of Case-Control and Cohort Studies (2.5)*	*Fall I*
Electives	17.5 credits in Area of Interest and Biostatistics	Fall
THESIS	Work on thesis	Fall
Spring Semester		
Electives	20 credits in Area of Interest and Biostatistics	Spring
THESIS	Work on Thesis	Spring I
THESIS	Submit to Advisor and Dept Academic Advisor at the beginning of Spring I	Spring I

**Courses in italic are strongly recommended, but not required*

Sample Master of Science Schedule can be found here.

Section Five Doctor of Science Program (SD, DPH)

Introduction

The doctoral programs are designed for students who plan careers primarily in epidemiologic research and teaching and for those who aspire to leadership roles in the health professions. Applicants to the SD/DPH program should hold at least a bachelor's degree and have a strong background in biology and mathematics. For these individuals, the degree generally takes four to five years to complete; candidates with relevant doctoral degrees may complete the program in three years. The DPH degree is available to students holding a prior doctorate and an MPH degree. The curricular requirements for the DPH degree are identical to that of the SD degree.

Unless courses equivalent to those described for the master's program have been taken previously, 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.

Guidelines for Completion of the Doctoral Degree

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 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.

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 and Completion: 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).

All papers included in the thesis must be in a form ready to submit for publication. "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, even though it may be awaiting comments from co-authors or other sign-offs. At least one of the thesis papers must be submitted by the time of the defense. 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. It is expected that committee members review thesis papers in a timely fashion (usually within 2 weeks).

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: Work done prior to the written examination or even before formal entry to the program can be used as part of the thesis (subject to the approval of the thesis committee), as long as that work was performed under the supervision of HSPH epidemiology faculty. Thus, for example, papers written at HSPH as part of the master's degree program could be included in the doctoral thesis if appropriate.

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 substudy 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

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).

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.

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 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.

Prospective/Final Program

All doctoral candidates are required to submit both a prospective and final program to the registrar's office. When filling out the prospective program please remember that the introductory Epidemiology courses (EPI200, EPI201, EPI208. EPI500, EPI 505, ID 538) cannot be used towards fulfilling the 20 credits required in your major. Likewise, the introductory biostatistics course (BIO200 or BIO201) cannot be used towards the 10 credits required for the biostatistics minor. The prospective program must be submitted by the end of the 2nd Semester.

A list of Epidemiology students whose submission of the final program, typically submitted by the end of the fourth semester, will be delayed, due to the scheduling of the written exam, will be forwarded to the Registrar's Office by the Epidemiology Department. This will serve as permission to delay submission of the final program in lieu of the General Petition Form.

PROSPECTIVE / FINAL PROGRAM

Name: Joann Alexander Harvard ID: 01234567

Major Field 1: Epidemiology
Major Field 2:
Minor Field 1: Aging
Minor Field 2: Biostatistics

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

Advisor: Dr Francine Grodstein

Major Field Title: Epidemiology

Course Code	Course Title	Credit Units	Grade	Semester/Year
EPI 202	Elements of Epidemiologic Research	2.5	A	Fall 2002
EPI 203	Design of Cohort and Case Control	2.5	A	Spring 2003
EPI 204	Analysis of Case Control and Cohort	2.5	A	Spring 2003
EPI 207	Advanced Epidemiologic Methods	2.5	A-	Fall 2003
EPi 247	Epi Methods Development	2.5	A-	Fall 2003
EPI 294	Principles of Screening	2.5	A	Spring 2004
ID 214	Nutritional Epi	2.5	A-	Spring 2004
EPI 205	Practice of Epidemiology	2.5	A	Fall 2004

Total Credits: 20

Minor Field 1 or Major Field 2: Aging

Course Code	Course Title	Credit Units	Grade	Semester/Year
EPI 254	Epidemiology of Aging	1.25	B+	Spring 2003
EPI 284	Epidemiology of Neurologic Diseases	2.5	A	Spring 2003
EPI 223	Cardiovascular Epidemiology	2.5	A-	Fall 2003
EPI 213	Cancer Epidemiology	2.5	A	Spring 2003
EPI 250	Molecular Epi	1.25	A-	Fall 2003

Total Credits: 10

Minor Field 2: Biostatistics

Course Code	Course Title	Credit Units	Grade	Semester/Year
BIO 210	Analysis of Rates & Proportions	5	B+	Spring 2003
BIO 213	Applied Regression for Clinical Research	5	A	Fall 2003

Total Credits: 10

Name: Joann Alexander Harvard ID: 01234567

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 2002

BIOSTATISTICS: List **two intermediate level courses:**

Courses Code and Title: BIO 213 Applie Regression Semester and Year: Fall 2003

Courses Code and Title: BIO 223 Applied Survival Semester and Year: Spring 2004

Complete this section only if this is your FINAL PROGRAM:

Nominations for Oral Qualifying Examination Committee:

Research Advisor: Walter Willett

Nominees (Please Print):	Nominee Will Examine in:
HSPH Faculty Member 1	Epidemiology
HSPH Faculty Member 2	Epidemiology
HSPH Faculty Member 3	Aging
HSPH Faculty Member 4	Biostatistics

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

Comments

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

Comments

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 Program *has been approved* by the Doctoral Subcommittee of the CAD.

Your Prospective Program *has not been approved* by the Doctoral Subcommittee of the CAD.

Your Final Program *has been approved* by the Doctoral Subcommittee of the CAD.

_____ has been appointed Chair of your Examining Committee.

Your 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 200 or BIO 201	EPI 207
BIO 210 or BIO 213	EPI 247
EPI 200 or EPI 201	EPI 289
EPI 202	EPI 294
EPI 204	

The second session covers substantive knowledge of epidemiology. Candidates are expected to be familiar with at least three disease-defined or exposure-defined areas, at levels of coverage given in the department's related courses. Candidates are encouraged to keep current with important recent developments in the topics they plan to select by regularly reading the major journals. Areas included in recent examinations are based on the department's twelve areas of interest.

Procedure of the Examination

The examination is offered once a year, in May or June. Candidates are asked to notify the Assistant Director of Graduate Studies of their intention to sit for the exam at least one month in advance. Additionally, participants are asked to submit a list of three substantive areas in which they wish to be examined. Regardless of the choices made on this list, however, students can choose to answer any five questions in the substantive portion of the examination. 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, subject to faculty approval, 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.

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* 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. Typically, the academic advisor serves on the research committee as chair. The research advisor 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.

The department requires that students notify the chair's office when they have scheduled their thesis defense and submit a copy of the thesis defense scheduling form to the Assistant Director of Graduate Studies to ensure proper announcement of the defense within the department.

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

Sample Doctor of Science/Doctor of Public Health Schedule can be found here.

Doctor of Science—Requirements	
EPI 201	Introduction to Epidemiology (2.5)
EPI 202	Elements of 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
EPI 294	Screening (2.5)
BIO 201	Introduction to Statistical Methods (5)
BIO 210 or	The Analysis of Rates and Proportions (5) or
BIO 213	Applied Regression for Clinical Research (5)
BIO 223 or	Applied Survival Analysis and Discrete Data Analysis (5) or
BIO 226	Applied Longitudinal Analysis (5)
EH 205	Human Physiology (5)
EH 208	Pathophysiology of Human Disease (2.5)
Strongly Suggested Courses	
EPI 203	Study Design in Epidemiologic Research (2.5)
EPI 215	Advanced Topics in Case Control and Cohort Studies (2.5)
Recommended Non-Epidemiology Courses	
BIO 210	Analysis of Rates and Proportion (5)
BIO 211	Regression and Analysis of Variance in Experimental Research (5)
BIO 213	Applied Regression for Clinical Research (5)
BIO 222	Basics of Statistical Inference (5)
BIO 223	Applied Survival Analysis & Discrete Data (5)
BIO 226	Applied Longitudinal Analysis (5)
EH 504	Principles of Toxicology (2.5)
Credit Requirements	
10	Substantive Credit
40	Ordinal credit
20/40	Above EPI intro-level courses (above EPI 200, 201)
10/40	Credits above intro-level courses (above BIO 200, 201) for your first minor
10/40	Credits in 2nd minor

KEY TO SAMPLE DOCTORAL SCHEDULE ON FOLLOWING PAGE

- * Double the time allowed for Part-Time Students
- # Epidemiology Students do not have to complete the Departmental Written Exam before scheduling the Oral Exam as indicated in the HSPH Handbook.
- Progress Reports must be submitted six months after passing the Oral Exam, and twice a year after that until the dissertation defense.
- @ Application for Degree must be submitted to the registrar's office on time-see page 6 for deadlines.

Doctor of Science | Doctor of Public Health | 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 *
THESIS	Begin work on Research	Spring
Year Two | Fall Semester		
EPI 207	Advanced Epidemiologic Methods (2.5)	Fall 1
EPI 215	*Advanced Topics in the Analysis of Case-Control and Cohort Studies (2.5)*	*Fall 1*
EPI 247	Epidemiologic Methods Development –Past/Present (2.5)	Fall 2
EPI 507	Genetic Epidemiology (2.5)	Fall 2
EH 205	Human Physiology (5)	Fall
Electives	10 Credits in Area of Interest	Fall
PROGRAM	Final Program and Chair of the Oral Exam Committee is approved	TBA
Spring Semester		
BIO 226	Applied Longitudinal Analysis (5)	Spring
Electives	20 credits in your Area of Interest and Independent Study	Spring
PROGRAM	Submit Final Program Form (HSPH requires submission end of 3rd Semester per HSPH but EPI students may petition to submit this form after the Written Exam *	TBA
WRITTEN EXAM	Preparation for Written Exam	Spring
THESIS	Begin work on Research	Spring
Year Three | Fall Semester		
EPI 205	Practice of Epidemiology	Fall
Electives	17.5 credits of courses and Independent Study	Fall
ORAL EXAM SCHEDULING	Chair of Oral Exam is named	End of 4th Semester *
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

Section Five Concentrations and Areas of Interest

Academic Concentrations

Inter-disciplinary concentrations are non-degree programs completed with a degree program.

Infectious Disease Epi

The interdisciplinary concentration in the epidemiology of infectious disease focuses on population studies incorporating both epidemiologic and laboratory methods. This academic concentration is intended for degree-seeking students who desire careers in research and teaching in infectious disease.

More information about the Infectious Disease Epi program can be found here.

Genetic and Molecular Epi

The purpose of the Academic Concentration in Molecular and Genetic Epidemiology is to address the pedagogical needs of students considering public health careers in the field of genetics. Accordingly, the goal of the concentration is to significantly prepare students to become world leaders in this arena by equipping them with the requisite expertise in the theories, topics, and skills related to public health practice and research in genetic and molecular biology.

More information about the Genetic and Molecular Epi program can be found here.

Women, Gender and Health Concentration

This interdisciplinary concentration is geared toward students who desire careers in research, teaching, and programs related to women, gender, and health. Addressing issues of women, gender, and health requires the study of the health of women and girls--and men and boys--throughout the life course, with gender, gender equality, and biology understood as important and interacting determinants of well-being and disease.

More information about the Women, Gender and Health Epi program can be found here.

Research Areas

Additional Research Areas in the Department of Epidemiology that focus on research.

Cardiovascular Research Area

The Program in Cardiovascular Epidemiology promotes and advances research collaboration and discussion among investigators with expertise in cardiovascular disease research. Program members' interests include nutrition, pharmacoepidemiology, aging, women's health, genetics, basic science, biostatistics, policy and risk analysis, social and environmental epidemiology, international health, pediatrics, and methods.

More information about the Cardiovascular Research program can be found here.

Causal Inference Research Area

The Causal Inference Program was established to foster education, research, and collaboration in the development and application of statistical methods for the causal analysis of complex longitudinal data in epidemiology and its methodologically allied sciences, such as biostatistics, health services research, sociology, education, health and social behavior, economics, computer science, artificial intelligence, and philosophy.

More information on the Causal Inference Research Program can be found here.

Areas of Interest

Students in any of the Epidemiology programs (Master of Science, Doctor of Science and Doctor of Public Health) selects from twelve areas of interest. The following sections include a suggested schedule as a guide in addition to the schedule for the degree program (Masters or Doctoral). * Courses with an asterisk are offered every other year.

Cancer Epidemiology and Prevention

The Cancer Epidemiology and Prevention Track at the Harvard School of Public Health was one of the first and remains one of the most comprehensive academic programs in the world dedicated to the training of cancer epidemiologists.

Our curriculum includes both research/methodology courses and courses of specific relevance to cancer epidemiology. Our faculty members conduct cutting edge research into the lifestyle, environmental and genetic factors that influence both cancer incidence and survival. Departmental research is conducted both in the US and internationally (e.g. China and Sweden) across a broad array of malignancies including breast, colorectal, lung, nasopharyngeal and prostate cancers. Much of this work is multi-disciplinary, conducted with colleagues in biostatistics, molecular pathology, cancer biology and immunology.

Our data resources, most notably large prospective cohort and case-control studies, along with collaborations at other Harvard Medical Area Institutions (e.g. Brighams & Womens Hospital, Massachusetts General Hospital, Dana Farber/Harvard Cancer Center) provide superb research opportunities for students. Cumulatively, these resources and opportunities result in an exceptionally rich and vibrant academic environment. Past graduates of our program serve as leaders in academia, government and industry throughout the world.

Recommended Coursework

EPI213 Epidemiology of Cancer

EPI224 Cancer Prevention*

EPI240 Use of Biomarkers in Epidemiologic Research*

EPI246 Applied Biomarkers in Cancer Epidemiology*

EPI249 Molecular Biology for Epidemiologists

EPI252 Infections and Cancer*

EPI257 Advanced Seminar in Cancer Epidemiology*

EPI294 Screening

SHH201 Society and Health

SHH211 Health Promotion through Mass Media

SHH249 Approaches to International Tobacco Control

ID510 Nutritional Epidemiology of Cancer

ID520 Advanced Topics in Nutrition and Cancer

* Courses with an asterisk are offered every other year

Cardiovascular Epidemiology

This area provides training in research methodology and the epidemiology of cardiovascular diseases. Doctoral students conduct research in a substantive or methodological area related to cardiovascular epidemiology. Research opportunities for students and post-docs include a broad area of topics including the role of diet, genetic, plasma markers, lifestyle characteristics, clinical interventions and environmental predictors of primary and secondary onset of cardiovascular disease. Trainees will have the opportunity to work with several large ongoing cohort, case-crossover, or clinical studies and to interact with other departments within the School of Public Health and Medical school with active cardiovascular research programs.

Courses for minor field

Cardiovascular epidemiology is not typically a minor area for epidemiology majors. Students from other departments may propose any of the above courses to create a minor.

Admission process and assignment of advisors

All applicants are evaluated with the standard admissions process through the admissions office and standing departmental review procedures. Before being accepted applicants are reviewed by at least 2 faculty members affiliated with the cardiovascular epidemiology concentration and by the department chair. Initial academic advisors are assigned at the time a student is offered admission into the program.

Timeline

The timeline for admissions, completion of the Departmental written exam and the school-wide oral exam follow the same requirements as those listed for the Department of Epidemiology and the Harvard School of Public Health. Any exceptions must be approved by the student's advisor and the Chair of the Department.

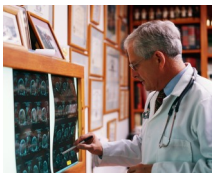
Required Coursework

EPI223 Cardiovascular Epidemiology
EPI245 Cardiovascular Epidemiology II - Reading the Literature
EPI249 Molecular Biology for Epidemiologists #

Recommended Coursework

EPI240 Use of Biomarkers in Epidemiologic Research #
EPI222 Genetic Epidemiology of Diabetes and its Complications *
ID214 Nutritional Epidemiology
SHH201 Society and Health
ID537 Obesity Epidemiology
BIO227 Fundamental Concepts in Gene Mapping

* Courses with an asterisk are offered every other year
 # Unless prior medical degree or background in molecular biology



Clinical Epidemiology

This area is designed primarily for clinicians and other health care professionals in the 42.5-credit master's program who wish to develop the quantitative skills needed for clinical research. Students take core courses in epidemiology and biostatistics to develop basic skills in study design and analysis that will allow them to examine clinical questions related to the diagnosis and treatment of disease. Additional courses in epidemiology and courses offered by other departments address related topics of potential interest such as health status and quality-of-life measurement, decision analysis, cost-effectiveness analysis, health services research, and quality improvement of health care.

While the appropriate content for this area may be covered by taking courses offered during the regular academic year (fall and spring semesters), requirements for the 42.5-credit SM degree in epidemiology may also be partially fulfilled by taking the summer courses offered through the Summer Program in Clinical Effectiveness and the Summer Session in Public Health Studies. In this schedule students begin their program by taking a core set of courses during an initial summer period. They complete the SM program by taking advanced courses during the regular academic year and, if desired, during two or more summer periods. Alternatively, students can satisfy the requirements for the 42.5-credit SM degree by taking courses during summer periods and completing a supervised research project. The content of this project typically entails the design and implementation of a clinical study, the analysis of the resulting data, and the creation of a manuscript of quality suitable for publication. An outline for this project must be submitted at the time of application.

Recommended Coursework

BIO213 Applied Regression for Clinical Research

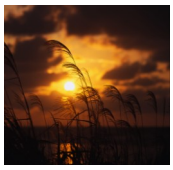
BIO214 Principles of Clinical Trials

EPI242 Seminar in Applied Research in Clinical Epidemiology

EPI271 Propensity Score Analysis: Theoretical and Practical Considerations

EPI288 Data Mining and Prediction

* Courses with an asterisk are offered every other year



Environmental and Occupational Epidemiology

This area is closely associated with the concentrations in exposure, epidemiology, and risk and in occupational health/occupational epidemiology in the Department of Environmental Health. Students take courses in epidemiology, environmental health, occupational health, biostatistics, toxicology, genetics, and environmental exposure assessment. Doctoral students conduct research in a substantive or methodologic area related to environmental or occupational health. Research emphasis includes the relationships between environmental and occupational exposures and cancer, children's health, cardiopulmonary disease, neurodegenerative disease, reproductive health, and gene-environment interactions.

Recommended Coursework

EH202 Principles of Environmental Health

EH205 Human Physiology

EH236 Epidemiology of Environmental and Occupational Health Regulations

EH269 Exposure Assessment for Environmental and Occupational Epidemiology SMITH

EH504 Principles of Toxicology

ID215 Environmental and Occupational Epidemiology

ID271 Advanced Regression for Environmental Epidemiology

* Courses with an asterisk are offered every other year

Epidemiologic Methods

This area provides training in the development and application of new methods in epidemiologic research. Students learn to use and justify classical epidemiologic methods in study design, data analysis, and interpretation of results. Students also receive training in biostatistical areas most relevant to epidemiologic research. Recent innovations in epidemiologic methodology are introduced through advanced courses and tutorials. Doctoral students conduct research with faculty members in the development of new methodologies and in novel applications of existing methodologies. Those enrolling in this area of interest ordinarily have completed four semesters of college calculus and one semester of linear algebra. Students engaged in this area will have an opportunity for collaboration with researchers working on causal inference in epidemiology and allied sciences. Another option for collaboration is with a cross-departmental group of epidemiologists and biostatisticians working on methods to adjust for bias due to exposure measurement error in nutritional, environmental and occupational health research.

Recommended Coursework

BIO222 Basics of Statistical Inference

BIO223 Applied Survival Analysis and Discrete Data Analysis

BIO226 Applied Longitudinal Analysis

BIO248 Advanced Statistical Computing

Masters-level students are encouraged to take the core methods courses that are required for doctoral students.

* Courses with an asterisk are offered every other year

Epidemiology of Aging

This area is geared toward those interested in the diseases and conditions, as well as research methods, specific to older populations. Social and cultural aspects of health in older persons are also covered. Core courses focus on the epidemiologic aspects of the study of aging and include topics in biology, statistics, and other relevant fields. Numerous research opportunities on a wide range of issues, including neurologic diseases, osteoporosis, incontinence, and others, are available in the Department of Epidemiology, as well as the Department of Nutrition, Channing Laboratory, the Division of Preventive Medicine at Brigham and Women's Hospital, and Hebrew SeniorLife.

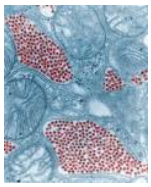
Recommended Coursework
EPI254 Epidemiology of Aging*

EPI284 Epidemiology of Neurologic Diseases*

GR705.40 (HMS Seminar) Developing an Interdisciplinary Approach to the Health Management of Older Adults Click here for course info

SHH260 Aging, Lifecourse Social Conditions, and Health Inequalities

* Courses with an asterisk are offered every other year



Infectious Disease Epidemiology

Research in this area focuses on the biological and dynamic features of infectious diseases, with emphasis on the use of epidemiologic approaches to study the social, behavioral, and biological determinants of infectious disease emergence, transmission, pathogenesis, and immunity. Courses within the department cover the common features of communicable diseases and their dynamics, methods for the analysis of transmission dynamics, and advanced topics in the epidemiology of certain specific infectious diseases, especially HIV. Courses in other departments provide introductions to the epidemiology of additional specific infectious diseases and to additional relevant methodologies, including spatial and time series analysis. Students in this area ordinarily join the interdisciplinary concentration in the epidemiology of infectious disease.

Required Coursework
EPI285 Infectious Disease Dynamics* NOW EPI 501 Dynamics of Infectious Diseases

Recommended Coursework
BIO287 Public Health Surveillance*

EPI255 Epidemiology of HIV, Part I: Etiology, Natural History & Transmission*

EPI256 Epidemiology of HIV, Part II: Therapeutic & Prevention Interventions*

EPI260 Mathematical Modeling of Infectious Diseases*

IMI201 Ecology, Epidemiology, and Control of Important Parasitic Diseases of Developing Areas

IMI208 Immunology of Infectious Disease*

* Courses with an asterisk are offered every other year

Molecular/Genetic Epidemiology

This area introduces students to the application of molecular and genetic methods in epidemiology. These methods may be useful as measures of exposure, disease susceptibility, or disease outcome. Training encompasses family-based association methods, genome-wide association studies to identify the chromosomal localization of genes associated with disease, and fine mapping and identification of these genes. Population-based studies correlate variation in genes with disease risk and prognosis and assess gene-environment interactions. Relevant courses explore the genetic epidemiology of complex diseases, including cancer, cardiovascular disease, diabetes, psychiatric illnesses, Alzheimer's disease, and asthma, as well as individual variation in drug response (pharmacogenomics). Students can collaborate with the HSPH Department of Environmental Health, the Channing Laboratory, the Dana-Farber Cancer Institute, and other research groups.

Recommended Coursework

BIO 227 Fundamentals concepts in Gene Mapping

BIO 277 Computational Biology

BIO 292 Introductory Genomics & Bioinformatics for Health Research

BIO 257 Advanced Statistical Genetics *

EPI 222 Genetic Epidemiology of Diabetes & its Complications*

EPI 249 Molecular Biology for Epidemiologists

EPI 293 Analysis of Genetic Association Studies Using Unrelated Subjects

EPI 250 NOW EPI 507 Genetic Epidemiology*

* Courses with an asterisk are offered every other year

Neuro-Psychiatric Epidemiology

This increasingly, integrated program is comprised of two areas of concentration. Students typically elect one of the areas below:

Neuroepidemiology This area provides training in research methodology and the epidemiology of neurological diseases. Current research is focused on the roles of diet, infections, and environmental exposures in the etiology of neurodegenerative diseases such as multiple sclerosis, Parkinson's disease, and amyotrophic lateral sclerosis and integrates biomarkers and genetic factors. Doctoral students conduct research in a substantive or methodological area related to neuroepidemiology.

Psychiatric Epidemiology This area introduces students to concepts and methods for studying the genetic and psychosocial factors that relate to the prevalence, incidence, and outcome of different types of psychiatric illnesses. Emphasis is given to issues of reliability and validity in studying such disorders among children, adolescents, and adults. The curriculum consists of specialized courses, as well as related courses offered in the HSPH Departments of Epidemiology, Biostatistics, and Society, Human Development, and Health. A wide range of research opportunities are available, with particular depth in psychiatric genetics, mental health services, pharmacoepidemiology, clinical trials, prevention, and community and cross-cultural studies.

Recommended Coursework

NEURO

BIO257 Advanced Statistical Genetics*

EPI240 Use of Biomarkers in Epidemiologic Research*

EPI254 Epidemiology of Aging*

EPI284 Epidemiology of Neurologic Diseases*

ID214 Nutritional Epidemiology

PSYCH

EPI219 Assessment Concepts and Methods in Psychiatric Epidemiology*

EPI220 Psychiatric Diagnosis in Clinic and Community Populations*

EPI241 Measuring Health Status*

EPI244 Genetic Epidemiologic Methods for Psychiatric and Other Complex Disorders

ID278 Mental Health of Children and Adolescents*

ID283 Epi Investigation of Social and Environmental Risk Factors for Psychiatric Disorders

ID521 Developmental Epidemiology of Adult Psychiatric Disorders

* Courses with an asterisk are offered every other year

Nutritional Epidemiology

Through courses in the Departments of Epidemiology and Nutrition, students in this area learn methods of nutritional assessment and their related strengths and weaknesses. Students also receive advanced training in the nutritional determinants of disease and in methods for analysis specific to research in nutritional epidemiology. Students can conduct research within several large prospective ongoing studies at HSPH and Harvard Medical School, including an examination of dietary factors in relation to cardiovascular disease, cancer, and other chronic diseases; a study of the interactions between nutritional and genetic determinants of disease; and the assessment of nutritional supplementation in relation to infectious agents and malnutrition.

Recommended Coursework

ID214 Nutritional Epidemiology

ID221 Nutritional Epidemiology II *

ID510 Nutritional Epidemiology of Cancer*

ID512 Molecular Basis of Nutritional and Metabolic Diseases

ID520 Advanced Topics in Nutrition and Cancer*

ID537 Obesity Epidemiology Hu

NUT201 Principles of Nutrition

NUT202 The Science of Human Nutrition

* Courses with an asterisk are offered every other year

Pharmacoepidemiology

This area focuses on the determinants of both unintended and expected effects of drugs, vaccines, biologics, medical procedures, and medical devices. Patterns of utilization, cost-benefit and risk-benefit analyses, and investigation of the distribution of diseases possibly amenable to medical intervention represent important secondary themes. The Department of Epidemiology offers courses in pharmacoepidemiology and a variety of ongoing research projects. Relevant courses elsewhere in the school cover such areas as clinical trials, meta -analysis, drug regulatory affairs, decision analysis, and health services research. Students in pharmacoepidemiology have the opportunity to attend courses and congresses outside the school and are encouraged to undertake internships in regulatory agencies or pharmaceutical and biotechnology companies. Students ordinarily have a prior degree in medicine or pharmacy. Others are expected to acquire substantially equivalent expertise in areas related to their research.

Recommended Coursework

BIO214 Principles of Clinical Trials

BIO262 Statistical Problems in Drug Development*

EPI221 Pharmacoepidemiology

EPI235 Epi Methods in Health Services Research*

EPI286 Advanced Pharmacoepidemiology

EPI295 Pharmacoepi: Introduction

EPI298 Seminars in Drug Safety *

Additional Recommended Courses

EPI233 Research Synthesis & Meta-Analysis

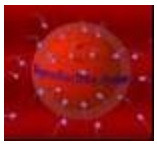
EPI271 Propensity Score Analysis: Theoretical & Practical Considerations

EPI288 Data Mining and Prediction

BIO211 Regression and Analysis of Variance in Experimental Research

BIO222 Basics of Statistical Inference

* Courses with an asterisk are offered every other year



Reproductive, Perinatal and Pediatric Epidemiology

This area focuses on the determinants of health and disease in reproduction and childhood development.

Reproductive topics include pubertal development, gynecologic disorders, female reproductive cancers, sexually transmitted infections, menstruation, menopause, female and male fertility, and assisted reproductive technologies.

Perinatal topics focus on pregnancy complications such as preeclampsia and gestational diabetes, as well as pregnancy outcomes such as labor and delivery, preterm birth and birth defects.

Pediatric topics center on disorders and diseases in childhood, adolescence, and young adulthood, including eating disorders, obesity, asthma, allergies, migraine, and depression.

Students can also investigate childhood and adolescent predictors of adult diseases, such as intrauterine exposures, fetal development, childhood growth patterns, pubertal timing, violence, diet, smoking, and tanning bed use. Many faculty have expertise in global issues of maternal health and child development.

Methodological issues pertaining to the special issues arising in the analysis of reproductive and perinatal outcomes (involving the environment and genome of mother, father, and offspring), epigenetics, and methods for collecting information from and about children and across the lifespan are a strong emphasis.

Core Coursework

EPI269 Epidemiological Research in Obstetrics and Gynecology
EPI270 Advanced Reproductive Epidemiology
WGH211 Women Gender and Health: Introductory Perspectives
ID 540 Life Course Epidemiology
EPI 504 Epidemiology of Disorders and Diseases of Childhood and Young Adulthood *

Additional Recommended Courses

ID215 Environmental and Occupational Epi
EPI296 Bridging Psychiatric Morbidity and Reproductive Outcomes
ID521 Developmental Epidemiology of Adult Psychiatric Disorders
EH298 Environmental Epigenetics

* Courses with an asterisk are offered every other year

CORE EPI COURSES

EPI200 Principles of Epidemiology	Fall 1
EPI201 Introduction to Epidemiology	Fall 1
EPI202 Elements of Epidemiologic Research	Fall 2, Sum 2
EPI203 Study Design in Epidemiologic Research	Spg 2
EPI204 Analysis of Case-Control and Cohort Studies	Spg 2
EPI208 Introduction to Clinical Epidemiology	Sum
EPI500 Fundamentals of Epidemiology	Fall 1, Sum 1
EPI 505 Epidemiologic Methods for Global Health	Sum 1

METHODOLOGY COURSES

EPI207 Advanced Epidemiologic Methods	Fall 1
EPI215 Advanced Topics in the Analysis of Case-Control and Cohort Studies	Fall 1
EPI233 Research Synthesis & Meta-Analysis	Spg
EPI236 Analytical Aspects of Clinical Epidemiology	Sum 1
EPI241 Measuring Health Status	Fall 2
EPI244 Genetic Epidemiologic Methods for Psychiatric and Other Disorders	Spg 2
EPI247 Epidemiologic Methods Development - Past and Present	Fall 2
EPI271 Propensity Score Analysis: Theoretical & Practical Considerations	WS
EPI288 Data Mining and Prediction	WS
EPI289 Causal Inference	Spg 2
EPI293 Analysis of Genetic Association Studies Using Unrelated Subjects	WS
EPI294 Screening	Spg 2

INTERDEPARTMENTAL COURSES

ID206 Scientific Writing in Nutrition and Epidemiology	Spg
ID214 Nutritional Epidemiology*	Spg
ID215 Environmental and Occupational Epidemiology*	Spg/Sum 1
ID221 Nutritional Epidemiology II*	Fall
ID236 Social Epidemiology*	Spg 1
ID269 Respiratory Epidemiology*	Fall 2
ID271 Advanced Regression for Environmental Epidemiology	Spg 1
ID278 Mental Health of Children and Adolescents	Spg 1
ID283 EPI Investigation of Social and Environmental Risks for Psych. Disorders*	Spring 2
ID510 Nutritional Epidemiology of Cancer*	Fall 2
ID520 Advanced Topics in Nutrition and Cancer	Fall 2
ID521 Developmental Epidemiology of Adult Psychiatric Disorders*	Fall 1
ID537 Obesity Epidemiology*	Fall
ID538 Foundations of Public Health	Fall
ID540 Life Course Epidemiology	Spring 1
WGH200 Women, Gender and Health	Spg 1
WGH207 Advanced Topics in Women, Gender and Health	Spg 2
WGH211 Women, Gender and Health: Introductory Perspectives	Fall 1
WGH220 Sexuality and Public Health	Fall 1
WGH304 Issues in Mental Health: Independent Study	TBA

SUBSTANTIVE COURSES

EPI213 Epidemiology of Cancer	Spg 1
EPI216 Epidemiology in Public Health Practice	Spg 1
EPI219 Assessment concepts and Methods in Psychiatric Epidemiology	Fall 2
EPI220 Psychiatric Diagnosis -Clinic and Community Populations	Spg 2
EPI221 Pharmacoepidemiology	Fall 2
EPI222 Genetic Epidemiology of Diabetes and its Complications	Spg 2
EPI223 Cardiovascular Epidemiology	Fall 2
EPI224 Cancer Prevention	Spg 2
EPI228 Oral Epidemiology	Fall
EPI229 Ophthalmic Epidemiology	Fall 2
EPI235 Health Services Epidemiology	Spg 2
EPI240 Use of Biomarkers in Epidemiological Research	Spg 2
EPI245 Cardiovascular Epidemiology II	Spg
EPI246 Applied Biomarkers in Cancer Epidemiology	Fall 2
EPI249 Molecular Biology for Epidemiologists	Fall 1
EPI252 Infections and Cancer	Spg 2
EPI254 Epidemiology of Aging	Spg 2
EPI255 EPI of HIV Part I: Etiology, Natural History and Transmission	Spg 1
EPI256 EPI of HIV, Part II: Therapeutic & Prevention Intervention	Spg 2
EPI260 Mathematical Modeling of Infectious Disease	Spg 2
EPI269 Epidemiological Research in Obstetrics and Gynecology	Fall 2
EPI284 Epidemiology of Neurologic Diseases	Spg 1
EPI286 Advanced Pharmacoepidemiology	Spg 2
EPI295 Pharmacoepidemiology: Introduction	Sum 2
EPI501 Dynamics of Infectious Diseases	Fall 2
EPI502 BIO & EPI of Antibiotic Resistance	WS
EPI 504 Epi of Disorders And Diseases Of Childhood and Young Adulthood	Spg 1
EPI 506 Translational Research Methods	WS
EPI 507 Genetic Epidemiology	Fall 2
EPI 508 Pathology for Epidemiologists	WS
EPI 509 Evidence Based Epidemiology	WS
EPI 510 Global Cancer Epidemiology	WS

SEMINAR COURSES

EPI205 Practice of Epidemiology	Fall
EPI242 Seminar in Applied Research in Clinical Epidemiology	Fall/Spg
EPI257 Advanced Seminar in Cancer Epidemiology	Fall 2
EPI270 Advanced Reproductive Epidemiology	Spg 2
EPI296 Bridging Psychiatric Morbidity and Reproductive Outcomes	WS
EPI 298 Case-Based Seminars on Drug Safety	Spg 1
ID320 Summer MPH Practicum for CLE	Sum 2
ID520 Advanced Topics in Nutrition and Cancer	Fall 2

Interdepartmental courses with an asterisk can be used towards meeting the substantive credit requirements.
Courses in green are only open to students participating in the summer program. Course listings are subject to change.

The most current course schedules by semester/department can be found here.

Course Descriptions can be found here.

Cancer Epidemiology and Prevention Track | Suggested Schedule		
Fall Semester Courses		
EPI 249	Molecular Biology for Epidemiologists	DeVivo Fall I
SHH 201	Society and Health	Kawachi Fall I
EPI 246	Applied Biomarkers in Cancer Epidemiology	Schernhammer Fall II
EPI 257	Advanced Seminar in Cancer	Tamimi Fall II
EPI 507	Genetic Epidemiology	Hunter, Jiali Fall II
ID 510	Nutritional Epidemiology of Cancer	Smith-Warner, Fall II
ID 520	Advanced Topics Nutrition of Cancer	Smith-Warner Fall II
Spring Semester Courses		
EPI 506	Translational Research Methods and Applications	Muti, Blandino WS
EPI 213	Epidemiology of Cancer	Giovannucci Spring I
SHH 211	Health Promotion through Mass Media	Viswanath Spring I
SHH 249	Approaches to International Tobacco Control	Connolly Spring I
EPI 240	Use of Biomarkers in Epidemiology Research	Spring II
EPI 294	Screening	Hernandez-Diaz Spring II
EPI 224	Cancer Prevention	Frazier Spring II 2010
EPI 252	Infections and Cancer *	TBA Spring II 2011

- * Courses with an asterisk are offered every other year
- SHDH courses and EPI 224 were part of Cancer Prevention Track (which no longer exists as a separate track)
- **New Wintersession Courses to Be Offered for 2009-10 (To be Announced)**
  EPI XXX Global Cancer Epidemiology WS
  EPI XXX Evidence Based Epidemiology WS
  EPI XXX Pathology for Epidemiologists WS

Cardiovascular Epidemiology Track | Suggested Schedule		
Fall Semester Courses		
BIO 227	*Fundamental Concepts in Gene Mapping*	*Laird Fall 2009*
ID 537	*Obesity Epidemiology*	*Villamor, Hu Fall 2009*
EPI 249	Molecular Biology for Epidemiologists * #	DeVivo Fall I
EPI 223	Cardiovascular Epidemiology	Mozaffarian Fall II
Spring Semester Courses		
EPI 245	Cardiovascular Epidemiology II	Mozaffarian Spring
ID 214	*Nutritional Epidemiology*	*Van Dam, Willett Spring*
EPI 240	*Use of Biomarkers in Epidemiologic Research * #*	*Hankinson, Tworoger Spring 1 2011*
EPI 222	*Genetic Epidemiology of Diabetes and its Complications **	*Hu, Doria Spring II 2011*
Summer Courses		
SHH 201	*Society and Health*	*Kawachi Summer I*

- * Courses with an asterisk are offered every other year
- Courses in italic are recommended only
- # Unless prior medical degree or background in molecular biology

Clinical Epidemiology Track | Suggested Schedule		
Fall Semester Courses		
BIO 213	Applied Regression for Clinical Research	Orav Fall
EPI 242	Seminar in Applied Research in Clinical Epidemiology	Cook Fall/Spring
Wintersession Courses		
EPI 288	Data Mining and Prediction	Cook WS
Spring Semester Courses		
EPI 271	Propensity Score Analysis	Kurth, Seeger WS
BIO 214	Principles of Clinical Trials	Lagakos Spring I

- * Courses with an asterisk are offered every other year

Environmental Epidemiology | Suggested Schedule		
Fall Semester Courses		
EH 205	Human Physiology	Shore Fall
EH 236	Epidemiology of Environmental and Occupational Health Regulations	Wagner Fall
EH 504	Principles of Toxicology	Hayes Fall
Spring Semester Courses		
EH 269	Exposure Assessment for Environmental and Occupational Epidemiology	Smith Spring
ID 215	Environmental and Occupational Epidemiology	Laden Spring
ID 271	Advanced Regression for Environmental Epidemiology	Schwartz Spring I
EH 202	Principles of Environmental Health	Dockery Spring II

- * Courses with an asterisk are offered every other year

Epidemiologic Methods | Suggested Schedule		
Fall Semester Courses		
BIO 222	Basics of Statistical Inference	P Williams Fall
EPI 207	Advanced Epidemiologic Methods	Hernan Fall I
EPI 247	Epidemiologic Methods Development	Mittleman Fall II
Spring Semester Courses		
BIO 223	Applied Survival Analysis and Discrete Data Analysis	Wei Spring
BIO 226	Applied Longitudinal Analysis	Hughes Spring
BIO 248	Advanced Statistical Computing	Catalano Spring
EPI 289	Causal Inference in Epidemiology	Hernan Spring I

- * Courses with an asterisk are offered every other year
- Courses in blue are mandatory for doctoral students only

Epidemiology of Aging | Suggested Schedule		
Fall Semester Courses		
Spring Semester Courses		
GR705.40	HMS Seminar: Developing an Inter-disciplinary approach to the Health Management of Older Adults	Satin Spring
EPI 284	Epidemiology of Neurologic Diseases	Ascherio Spring I
SHH 260	Aging, Lifecourse Social Conditions, and Health Inequalities	Glymour Spring II
EPI 254	Epidemiology of Aging	Grodstein Spring II

- * Courses with an asterisk are offered every other year

Infectious Disease Epidemiology | Suggested Schedule		
Fall Semester Courses		
IMI 201	*Ecology, Epidemiology, and Control of Important Parasitic Diseases of Developing Areas*	*Duraisingh Fall I*
EPI 255	*Epidemiology of HIV, Part I: Etiology, Natural History & Transmission*	*Seage Fall II*
Spring Semester Courses		
EPI 256	*Epidemiology of HIV, Part II: Therapeutic & Prevention Interventions*	*Seage WS 2010*
BIO 287	*Public Health Surveillance*	*Ozonoff Spring 2011*
EPI 260	*Mathematical Modeling of Infectious Diseases*	*Lipsitch Spring 2011*
IMI 208	*Immunology of Infectious Disease*	*Behar Spring 2011*
EPI 501	Dynamics of Infectious Diseases	Murray Spring II

- * Courses with an asterisk are offered every other year
- Courses in *italic* are recommended only

Molecular and Genetic Epidemiology | Suggested Schedule		
Fall Semester Courses Year One		
EPI 249	Molecular Biology for Epidemiologists	DeVivo Fall I
EPI 507	Genetic Epidemiology	Hunter Fall II
Spring Semester Courses		
EPI 293	Analysis of Genetic Association Studies Using Unrelated Subjects	Kraft WS
Fall Semester Courses Year Two		
BIO 277	Computational Biology	Yuan Fall
BIO 227	Fundamentals concepts in Gene Mapping	Laird Fall II
Spring Semester Courses		
BIO 257	Advanced Statistical Genetics	Laird Spring 2011
EPI 222	Genetic Epidemiology of Diabetes & its Complications	Hu Spring 2011
BIO 292	Introductory Genomics & Bioinformatics for Health Research	Quackenbush Spring I

- * Courses with an asterisk are offered every other year

Neuro-Psychiatric Epidemiology | Suggested Schedule		
Fall Semester Courses		
ID 521	Developmental Epidemiology of Adult Psychiatric Disorders	Koenan Fall I 2010
EPI 219	Assessment Concepts and Methods in Psychiatric Epidemiology	Blacker Fall II
EPI 241	Measuring Health Status	TBA Fall II 2009
Spring Semester Courses		
BIO 257	Advanced Statistical Genetics	Laird Spring 2011
ID 214	Nutritional Epidemiology	Van Dam Spring
EPI 240	Use of Biomarkers in Epidemiologic Research	Hankinson Spring I 2011
EPI 254	Epidemiology of Aging	Grodstein Spring I 2010
EPI 284	Epidemiology of Neurologic Diseases	Ascherio Spring I 2011
ID 278	Mental Health of Children and Adolescent	Molnar Spring I 2010
ID 283	Epi Investigation of Social and Environmental Risk Factors for Psychiatric Disorders	Gilman Spring II

- * Courses with an asterisk are offered every other year

Nutritional Epidemiology | Suggested Schedule		
Fall Semester Courses		
ID 221	Nutritional Epidemiology II	Ascherio Fall 2009
ID 537	Obesity Epidemiology	Hu Fall 2009
ID 510	Nutritional Epidemiology of Cancer	Smith-Warner Fall II 2009
ID 520	Advanced Topics in Nutrition and Cancer	Smith-Warner Fall II 2010
NUT 201	Principles of Nutrition	Lo Fall II
Spring Semester Courses		
ID 214	Nutritional Epidemiology	Van Dam Spring
ID 512	Molecular Basis of Nutritional and Metabolic Diseases	Hotamisligl Spring
NUT 202	The Science of Human Nutrition	Sacks Spring

- * Courses with an asterisk are offered every other year

Pharmacoepidemiology | Suggested Schedule		
Fall Semester Courses		
BIO 211	Regression and Analysis of Variance in Experimental Research	Catalano Fall
BIO 222	Basics of Statistical Inference	P Williams Fall
BIO 262	Statistical Problems in Drug Development	Testa Fall 2009
EPI 221	Pharmacoepidemiology	Walker Fall II
Spring Semester Courses		
EPI 271	Propensity Score Analysis: Theoretical & Practical Considerations	Kurth WS
EPI 288	Data Mining and Prediction	Cook WS
EPI 233	Research Synthesis & Meta-Analysis	Hsieh Spring
BIO 214	Principles of Clinical Trials	Lagakos Spring I
EPI 298	Seminars in Drug Safety	Hernandez-Diaz Spring I
EPI 235	Epi Methods in Health Services Research	Setoguchi Spring II 2011
EPI 286	Advanced Pharnacoepidemiology	Schneeweiss Spring II
Summer Semester Courses		
EPI 295	Pharmacoepi: Introduction	Chan Summer II

- * Courses with an asterisk are offered every other year

Reproductive, Perinatal and Pediatric Epidemiology | Suggested Schedule		
Fall Semester Courses		
WGH 211	Women Gender and Health: Introductory Perspectives	Missmer Fall I
EPI 269	Epidemiological Research in Obstetrics and Gynecology	Michels Fall II
Spring Semester Courses		
ID 540	Life Course Epidemiology	Gilman, Koenan Spring I
EPI 504	Epidemiology of Disorders and Diseases of Childhood and Young Adulthood *	Field Spring I
EPI 270	Advanced Reproductive Epidemiology	Rich-Edwards Spring II

- * Courses with an asterisk are offered every other year

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. The representatives currently on the committee are as follows:

Alexandra Binder | SM 2 '11 student, Molecular and Genetic Epidemiology
John Jackson | SD '12 student, Psychiatric Epidemiology
Pamela Rist | SM '09 and SD '13 student, Epidemiology of Aging
Irene Shui | SD '11 Cancer Epidemiology

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 or the Assistant Director of Graduate Studies.

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, Executive Assistant to the

The Epidemiology Buddy System

Each year new students to the two-year masters and doctoral programs are paired with a current student who takes time to answer questions and assist with concerns related to the new student's academic career. Contact the Assistant Director of Graduate Studies for more information. .

HSPH Student Coordinating Committee

The Student Coordinating Committee (SCC) is the Harvard School of Public Health's student government. Currently, the SCC has 21 officers. SCC works closely with faculty and administration on important school-wide issues. It also organizes and sponsors social, educational, and community service events.

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

For the most recent edition the Department Newsletter Epitome, click here

Resources

Every effort is made to provide Epidemiology students with physical and academic resources to support academic goals.

The Epitome Newsletter

The highly-regarded 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 Rebecca Cantor, Newsletter Editor.

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 room 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 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. If rooms are unavailable students can check other departments for rooms or 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.

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:

- Volunteer 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 *Epitome*
- 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