PUBLIC HEALTH

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FIELDS OF STUDY
Programs of study are offered in the areas of Biostatistics, Chronic Disease Epidemiology, Social and Behavioral Sciences, Environmental Health Sciences, Health Policy and Management, and Epidemiology of Microbial Diseases.

SPECIAL ADMISSIONS REQUIREMENTS
Applicants should have a strong background in the biological and/or social sciences. Students pursuing a Biostatistics specialty should have a strong background in mathematics. The GRE General Test is required. The TOEFL is required of all applicants whose native language is not English. IELTS scores are also accepted in addition to or in lieu of TOEFL scores. This requirement is waived only for applicants who, prior to matriculation at Yale, will have received a baccalaureate degree or its foreign equivalent from a college or university where English is the primary language of instruction. Applicants must have studied in residence at the baccalaureate institution for at least three (3) years to receive the waiver. Applicants who do not qualify for a waiver but have taken the TOEFL within the past two years will need to have their TOEFL scores released to the Yale Graduate School of Arts and Sciences (code 3987).

ACADEMIC REQUIREMENTS
Generally the first two years are devoted primarily to course work and rotations for students in some areas. All doctoral students are required to successfully complete a minimum of ten graduate-level courses and must satisfy the individual departmental requirements, detailed below. Courses such as Dissertation Research, Preparing for Qualifying Exams, Research Ethics and Responsibility, or Seminar do not count toward the course requirements. However, students must register for these “courses” in order for them to appear on the transcript.

All first-year students must enroll in and complete training in Research Ethics and Responsibility (EPH 600). This course will introduce and prepare students for responsible conduct in research, including data acquisition and management, mentor/trainee responsibilities, publication practices and authorship standards, scientific misconduct, and conflict of interest. Research Ethics and Responsibility is offered annually and is graded Satisfactory/Unsatisfactory.
The Graduate School uses grades of Honors, High Pass, Pass, or Fail. Students are required to earn a grade of Honors in at least two full-term courses and are expected to achieve a High Pass average. (This applies to courses taken after matriculation in the Graduate School and during the nine-month academic year.)

Teaching and research experiences are regarded as an integral aspect of the graduate training program. All students are required to serve as teaching fellows for a minimum of two terms, typically during years two and three. With the permission of the director of graduate studies (DGS), the total teaching requirement beyond two terms may be reduced for students who are awarded fellowships supported by outside funding or who are graduate research assistants in year three. Other exceptions may be granted after two terms of teaching are completed, with the approval of the DGS. During the first term of teaching, students must attend a training session conducted by the Center for Teaching and Learning. First-year students are encouraged to focus their efforts on course work and are not permitted to serve as teaching fellows.

**Required Course Work**

**BIOSTATISTICS**

Ph.D. students in the Department of Biostatistics (BIS) must complete a minimum of fifteen courses (not including BIS 525, BIS 610, BIS 695, and EPH 600). Course waivers must be recommended by the academic adviser and approved by the department chair and DGS.

Required courses are: both terms of BIS 525, Seminar in Biostatistics and Journal Club; BIS 557, Computational Statistics; BIS 567, Bayesian Statistics; BIS 610, Applied Area Readings for Qualifying Exams; BIS 628, Longitudinal and Multilevel Data Analysis; BIS 643, Theory of Survival Analysis; BIS 646, Nonparametric Statistical Methods and Their Applications; BIS 678, Statistical Consulting; BIS 681, Statistical Consulting Lab; BIS 691, Theory of Generalized Linear Models; BIS 695, Summer Internship in Biostatistical Research; CDE 508, Principles of Epidemiology I; S&DS 610, Statistical Inference; S&DS 612, Linear Models; EPH 600, Research Ethics and Responsibility; and EPH 608, Frontiers of Public Health. Students entering the doctoral program with an M.P.H. are exempt from EPH 608. Students with prior graduate-level biostatistics courses may be exempt from CDE 508.

In consultation with their academic adviser, students choose a minimum of four additional electives that will best prepare them for dissertation work.

Students funded by specific fellowships may be subject to additional requirements and should discuss this with their adviser.

**CHRONIC DISEASE EPIDEMIOLOGY**

Ph.D. students in the Department of Chronic Disease Epidemiology (CDE) must complete a minimum of fifteen courses (not including CDE 610 and EPH 600). Course waivers must be recommended by the academic adviser and approved by the department chair and DGS. Students must complete course work that introduces them to the breadth of public health (EPH 608, Frontiers of Public Health). Students entering the doctoral program with an M.P.H. are exempt from EPH 608. Required courses (or their equivalents) are: CDE 502, Physiology for Public Health; CDE 508, Principles of Epidemiology I; CDE 516, Principles of Epidemiology II; CDE 532, Measurement Issues in Chronic Disease Epidemiology; CDE 534, Applied Analytic Methods in Epidemiology; CDE 610, Applied Area Readings for Qualifying Exams; CDE 617, Developing a Research Proposal*; CDE 619, Advanced Epidemiologic Research Methods; CDE 634, Advanced Applied Analytic Methods in Epidemiology and Public Health; and CDE 650, Introduction to Evidence-Based Medicine and Health Care. In addition, in consultation with their dissertation adviser, students choose three 600-level course units in Biostatistics as well as three additional electives that will best prepare them for their dissertation research.

**SOCIAL AND BEHAVIORAL SCIENCES**

Ph.D. students in the Social and Behavioral Sciences (SBS) must complete a minimum of fifteen courses (not including EPH 600) from the following courses or their equivalents. Course waivers must be recommended by the academic adviser and approved by the department chair and DGS. Students must complete course work that introduces them to the breadth of public health (EPH 608, Frontiers of Public Health). Students entering the doctoral program with an M.P.H. may be exempt from EPH 608. Required courses (or their equivalents) are: CDE 508, Principles of Epidemiology I; CDE 516, Principles of Epidemiology II; CDE 534, Applied Analytic Methods in Epidemiology; CDE 617, Developing a Research Proposal*; SBS 580, Qualitative Methods; SBS 610, Applied Area Readings for Qualifying Exams; SBS 676, Questionnaire Development; and SBS 699, Advanced Topics in Social and Behavioral Sciences. In addition, in consultation with their dissertation adviser, students choose three advanced-level (600 or above) statistics courses (from Biostatistics, Psychology, Political Science, Sociology, or Statistics and Data Science) as well as three additional electives that will best prepare them for their dissertation research.

Students supported by training grants may be subject to additional requirements and should discuss whether there are training-specific requirements with the principal investigator of the grant.

* CDE 617 is not required of students funded by the Interdisciplinary HIV Prevention Training Grant. Those students must take a fourth elective in order to meet the fifteen-course requirement.

**ENVIRONMENTAL HEALTH SCIENCES**

Ph.D. students in Environmental Health Sciences have a choice of two concentrations: Environmental Epidemiology and Exposure Science, and Environmental and Molecular Toxicology. For both concentrations, courses required in the first year are: BIS 505, Statistical Thinking I; BIS 505, Statistical Thinking II; EMD 508, Principles of Epidemiology I; EHS 503, Public Health Toxicology; EHS 525,
Seminar in Environmental Health; and EPH 600, Research Ethics and Responsibility. Students must also complete course work that introduces them to the breadth of public health (EPH 608, Frontiers of Public Health). Students entering the doctoral program with an M.P.H. are exempt from EPH 608. Ph.D. students enrolled in EHS 503 and EHS 525 may be assigned additional readings. Students who select specialization in Environmental Epidemiology and Exposure Science are required to take EHS 507, Environmental Epidemiology; and EHS 508, Assessing Exposures to Environmental Stresses. Students who select specialization in Environmental and Molecular Toxicology are required to take EHS 545, Molecular Epidemiology. In addition, all students are required to complete two research rotations during the first year: EHS 620 (total of two units). At the end of the lab rotation students give a presentation and are graded based on their rotation work and presentation.

In the second year, students specializing in Environmental Epidemiology and Exposure Science must choose a minimum of three electives from the following: BIS 511, GIS Applications in Epidemiology and Public Health; BIS 623, Applied Regression Analysis; BIS 625, Categorical Data Analysis; BIS 628, Longitudinal and Multilevel Data Analysis; CDE 617, Developing a Research Proposal; EHS 502, Physiology for Public Health; EHS 511, Principles of Risk Assessment; EHS 520, Case-Based Learning for Genetic and Environmental Diseases; EHS 545, Molecular Epidemiology; EHS 562, Systems Technologies, Big Data, and Biomarkers; and EHS 580, Environmental Hormones and Human Health. Students specializing in Environmental and Molecular Toxicology must choose a minimum of three electives from the following: EHS 502, Physiology for Public Health; CDE 617, Developing a Research Proposal; EHS 508, Assessing Exposures to Environmental Stresses; EHS 537, Water, Sanitation, and Global Health; EHS 520, Case-Based Learning for Genetic and Environmental Diseases; EHS 562, Systems Technologies, Big Data, and Biomarkers; and EHS 511, Principles of Risk Assessment.

EPIDEMIOLOGY OF MICROBIAL DISEASES

Ph.D. students in the Department of Epidemiology of Microbial Diseases (EMD) must complete a minimum of ten courses (not including EPH 600). Course waivers must be recommended by the academic adviser and approved by the department chair and DGS.

Courses in biostatistics, epidemiology, and microbiology are strongly recommended. The specific courses recommended depend on the background of individual students and their stated research interests. An individual program that includes courses, seminars, and research rotations is developed by the student and the student’s academic adviser. All students are required to complete three distinct research rotations. These are done in the fall and spring terms and in the summer between the first and second years. Students will be asked to prepare a brief presentation at the end of each rotation. These research rotations (EMD 670) are graded and account for three of the required ten courses. Student progress is reviewed at the end of each academic year.

Students are required to complete course work in epidemiology (EMD 508, Principles of Epidemiology I; or CDE 516, Principles of Epidemiology II). In addition, students must complete course work that introduces them to the breadth of public health (EPH 608, Frontiers of Public Health). Students entering the doctoral program with an M.P.H. are exempt from EPH 608. Students with prior graduate-level epidemiology courses may be exempt from course work in epidemiology.

The following courses are suggested as appropriate for Ph.D. students in EMD; however, other courses in Public Health or in other departments may also be appropriate: CBIO 602, Molecular Cell Biology; CDE 516, Principles of Epidemiology II; EMD 508, Principles of Epidemiology I; EMD 538, Quantitative Methods for Infectious Disease Epidemiology; EMD 539, Introduction to Public Health Surveillance; EMD 543, Global Aspects of Food and Nutrition; EMD 548, Observing Earth from Space; EMD 550, Biology of Insect Disease Vectors; EMD 553, Transmission Dynamic Models for Understanding Infectious Diseases; EMD 657, Tackling the Big Three: Malaria, TB, and HIV in Resource-Limited Settings; EMD 680, Advanced Topics in Tropical Parasitic Diseases; F&ES 500, Landscape Ecology; HPM 570, Cost-Effectiveness Analysis and Decision Making; and PATH 650, Cellular and Molecular Biology of Cancer.

HEALTH POLICY AND MANAGEMENT

Ph.D. students in the Department of Health Policy and Management (HPM) are required to develop expertise in one of three disciplinary concentrations – Economics; Organizational Theory and Management; or Political and Policy Analysis – and then to apply this discipline to a more specialized area; the latter becomes their area of distinction.

Students are required to complete the course work detailed below, or the equivalent of the topic areas covered in these courses. The course listing represents a suggested program of study. The standard number of courses taken is eighteen, with the option of obtaining credits for previous courses. With the approval of the academic adviser and DGS, alternative courses that better suit the needs of the student may satisfy the course work requirement. The departmental representative to the Graduate Student Executive Committee (GSEC), in conjunction with the student’s adviser, is responsible for determining if core course requirements have been satisfied by previous course work or alternative courses. If so, the student should apply for a course waiver through the Graduate School. HPM students can only waive up to two of the eighteen courses.

Courses required of all students are: EPH 600, Research Ethics and Responsibility (does not count toward the total number of required courses); both terms of HPM 617, Colloquium in Health Services Research (does not count toward the total number of required courses); CDE 508, Principles of Epidemiology I; and EPH 608, Frontiers of Public Health. Students entering the program with an M.P.H. degree may be exempt from CDE 508 and EPH 608.

HPM 610, Applied Area Readings, is required of all second-year students. Students are also expected to attend the departmental research seminar for faculty and the doctoral research seminar.

In Health Policy and Management, a minimum of four courses, all with Ph.D. readings, are required from the following: HPM 510, Introduction to Health Policy and Health Systems; HPM 514, Health Politics, Governance, and Policy; HPM 560, Health Economics and U.S. Health Policy; HPM 561, Managing Health Care Organizations; HPM 570, Cost-Effectiveness Analysis and Decision Making; HPM 573, Advanced Topics in Modeling Health Care Decisions; HPM 587, Advanced Health Economics; HPM 590, Addiction, Economics, and Public Policy; and HPM 597, Capstone Course in Health Policy.

**Disciplinary Concentrations**

Students in HPM must complete a minimum of four courses, all with Ph.D. readings, in their chosen disciplinary concentration.

In Economics, required courses are: ECON 545, Microeconomics; and ECON 558, Econometrics (which may count as a Methods and Statistics class or as a disciplinary concentration class, but not both). In addition, students are required to take two field courses in a concentration area in which they plan to develop expertise. In Behavioral Economics, two courses from: MGMT 758, Foundations of Behavioral Economics; and PSYC 553 and PSYC 554, Behavioral Decision Making. In Industrial Organization: ECON 600, Industrial Organization I; and ECON 601, Industrial Organization II. In Labor Economics, ECON 630, Labor Economics I; and ECON 631, Labor Economics II. In Public Finance, two courses from: ECON 556, Topics in Empirical Economics and Public Policy; ECON 680, Public Finance I; and ECON 681, Public Finance II.

In Organizational Theory and Management, required courses are: MGMT 731, Organizations/Management II: Organizations and the Environment; MGMT 733, Theory Construction; MGMT 736, Organizations/Management I: Inside Organizations; and HPM 600, Directed Readings: Organizational Behavior and Theory in Health Care.

In Political and Policy Analysis, four courses are required, selected in consultation with the student’s adviser. Suggested courses are: PLSC 617, Deliberative Democracy and Beyond; PLSC 766, Politics and Markets; PLSC 800, Introduction to American Politics; PLSC 801, Political Preferences and American Political Behavior; PLSC 802, Collective Action and Choice; PLSC 803, American Politics Institutions III; PSYC 553, Social Science and Institutional Design; and SOCY 557, Political Sociology.

HPM students take qualifying exams in each of three areas: (1) health policy and management; (2) empirical analysis and/or statistics; and (3) the student’s disciplinary concentration. Typically these are taken in the summer after two years of course work.

**SPECIAL REQUIREMENTS FOR THE PH.D. DEGREE**

At the end of years one and two, advisers will be asked to complete a progress report for each student evaluating the student’s academic progress and describing the student’s readiness for teaching and/or conducting research. This is then discussed with the student and reviewed by the DGS. Students who have not progressed adequately will be asked to meet with the DGS to address the situation.

The qualifying exam is typically taken by the end of the second full academic year. With the assistance of the faculty adviser, generally after qualifying exams, each student requests appropriate faculty members to join a dissertation advisory committee (DAC). The DAC reviews and approves the prospectus as developed by the student and submits it to the DGS and the Graduate Studies Executive Committee for approval. The dissertation prospectus must be approved by the end of the third year.

To be admitted to candidacy, students must: (1) satisfactorily complete the course requirements for their department as outlined above; achieve grades of Honors in at least two full-term courses, and achieve an overall High Pass average; (2) obtain an average grade of High Pass on the qualifying exam; and (3) have the dissertation prospectus approved by the Graduate Studies Executive Committee. Students who have been admitted to candidacy are required by the Graduate School to complete an annual Dissertation Progress Report.

Each DAC is expected to meet as a group at least twice each year, and more frequently if necessary. The student schedules meetings of the DAC. The chair/adviser of the DAC produces a summary evaluation of progress and plans for the next six months. This document is to be distributed to each committee member for comments, and the student and the DGS are to receive a copy of the final document. The DAC reviews the progress of the dissertation research and decides when the dissertation is ready to be submitted to the readers. This decision is based on a closed defense of the dissertation, which involves a formal oral presentation to the DAC and other invited faculty. Upon completion of the closed defense, the chair/adviser of the DAC submits the recommendation to the Graduate Studies Executive Committee along with the names of three appropriate readers.

Doctoral dissertations originating in Public Health must also be presented in a public seminar. This presentation is scheduled after the submission of the dissertation to the readers and preferably prior to the receipt and consideration of the readers’ reports. At least one member of the DAC supervising the dissertation and at least one member of the Graduate Studies Executive Committee are required to attend the presentation.
MASTER’S DEGREES

M.Phil. (en route to the Ph.D.) The M.Phil. is awarded to students who have advanced to candidacy. When students advance to candidacy, the registrar’s office automatically submits a petition for the awarding of the M.Phil. degree.

Terminal Master’s Degree Program The School offers a terminal master’s degree program leading to an M.S. in Public Health in two specialty areas: Biostatistics (a two-year program) and Chronic Disease Epidemiology (a one-year program). All students must fulfill both the departmental and Graduate School requirements for a terminal M.S. degree.

Students must have an overall grade average of High Pass, including a grade of Honors in at least one full-term graduate course (for students enrolled in the one-year program in Chronic Disease Epidemiology) or in at least two full-term graduate courses (for students enrolled in the two-year program in Biostatistics). In order to maintain the minimum average of High Pass, each grade of Pass must be balanced by one grade of Honors. For more details, please see Course and Honors Requirements under Policies and Regulations.

A Biostatistics or Chronic Disease Epidemiology student who is withdrawing from the Ph.D. program, and has successfully completed all required course work for the terminal M.S. degree (described below), may apply and be recommended for the M.S. in Public Health. In the other departments, students must have successfully completed (prior to withdrawal) at least ten courses in the doctoral program and a capstone experience, achieving a minimum of two Honors grades and an overall High Pass average. Students who withdraw after qualifying for or receiving the M.Phil. are not eligible for an M.S. degree.

Fields of Study

TERMINAL M.S. IN BIOSTATISTICS

Faculty in the Biostatistics department of the School of Public Health offer a two-year terminal Master of Science degree. Fields include clinical trials, epidemiologic methodology, statistical genetics, and mathematical models for infectious diseases.

Special Admissions Requirements

Applicants should have a strong background in quantitative sciences such as mathematics. In addition, it is recommended that applicants have undergraduate course work in the biological and social sciences. At a minimum, applicants would have taken one year of calculus and a course in linear algebra prior to enrolling in this program. The GRE General Test is required. The TOEFL is required of all applicants whose native language is not English. This requirement is waived only for applicants who, prior to matriculation at Yale, will have received a baccalaureate degree or its foreign equivalent from a college or university where English is the primary language of instruction. If you do not qualify for a waiver but have taken the TOEFL within the past two years, you will need to have your TOEFL scores released to us (code 3987).

Course Requirements

The Biostatistics track requires the completion of fifteen required courses (not including EPH 600, BIS 695, and BIS 525). Required courses are: BIS 525, Seminar in Biostatistics and Journal Club; BIS 540, Fundamentals of Clinical Trials; BIS 623, Applied Regression Analysis; BIS 625, Categorical Data Analysis; BIS 628, Longitudinal and Multilevel Data Analysis; BIS 630, Applied Survival Analysis; BIS 678, Statistical Consulting; BIS 679, Advanced Statistical Programming in SAS and R; BIS 681, Statistical Consulting Lab; BIS 695, Summer Internship in Biostatistical Research; CDE 508, Principles of Epidemiology I; EPH 600, Research Ethics and Responsibility; S&D541, Probability Theory; and S&D 542, Theory of Statistics. Students entering the program with an M.P.H. may be exempt from CDE 508.

Students must complete two Statistics electives at the 600 level. Students will also be required to attend a Professional Skills Seminar (details provided in the first term).

Additionally students must choose two Biostatistics electives from these courses: BIS 557, Computational Statistics; BIS 567, Bayesian Statistics; BIS 643, Theory of Survival Analysis; BIS 646, Nonparametric Statistical Methods and Their Applications; BIS 651, Spatial Statistics in Public Health; and BIS 691, Theory of Generalized Linear Models. Students demonstrating a mastery of topics covered by the required courses may replace them with more advanced courses but must receive written permission from their advisor and the DGS prior to enrolling in the substitute courses.

Students wishing to complete a thesis may enroll in BIS 650 (1 course unit). This would be an additional requirement and cannot replace any of the required courses noted above.

TERMINAL M.S. IN CHRONIC DISEASE EPIDEMIOLOGY

Faculty in the Chronic Disease Epidemiology department of the School of Public Health offer a one-year terminal Master of Science degree. This one-year program is designed for medical and health care professionals (e.g., M.D., Ph.D., D.V.M., D.D.S., D.M.D.) who seek the skills necessary to conduct epidemiological research in their professional practice.

Special Admissions Requirements

Applicants should have a basic understanding of quantitative science and statistics. It is recommended that candidates have strong science backgrounds and demonstrated competency in statistical analysis and logical thinking. Applicants from rigorous programs in the biological or social sciences will be given preference. At a minimum, applicants should have one year of course work in statistics or
equivalent prior to enrolling in this program. Applicants must submit scores from either the MCAT or the GRE General Test. Students whose native language is not English must take the TOEFL or IELTS examination.

Course Requirements

The M.S. track in Chronic Disease Epidemiology requires the completion of ten courses (excluding the Ethics course, EPH 600; and Seminar, CDE 525), including a capstone course. * Required courses are: BIS 623, Applied Regression Analysis; BIS 625, Categorical Data Analysis; BIS 630, Applied Survival Analysis; CDE 508, Principles of Epidemiology I; CDE 516, Principles of Epidemiology II; CDE 523, Measurement Issues in Chronic Disease Epidemiology; CDE 525, Seminar in Chronic Disease Epidemiology and Social and Behavioral Sciences; CDE 617, Developing a Research Proposal; and EPH 600, Research Ethics and Responsibility.

In addition, students must complete three electives. Suggested electives are: BIS 540, Fundamentals of Clinical Trials; BIS 561, Advanced Topics and Case Studies in Multicenter Clinical Trials; BIS 643, Theory of Survival Analysis; BIS 645, Statistical Methods in Human Genetics; CDE 520, Case-Based Learning for Genetic and Environmental Diseases; CDE 531, Health and Aging; CDE 532, Epidemiology of Cancer; CDE 533, Topics in Perinatal Epidemiology; CDE 535, Epidemiology of Heart Disease and Stroke; CDE 562, Nutrition and Chronic Disease; CDE 597, Genetic Concepts in Public Health; CDE 600, Directed Readings (one term); CDE 634, Advanced Applied Analytical Methods in Epidemiology and Public Health; and CDE 650, Introduction to Evidence-Based Medicine and Health Care.

* In the capstone course CDE 617, the student is required to develop a grant application that is deemed reasonably competitive by the instructor. An alternative to this capstone course is an individualized tutorial (CDE 600) in which the student completes a manuscript that is suitable for submission for publication in a relevant journal.

M.D./PH.D. PROGRAM REQUIREMENTS FOR PUBLIC HEALTH

All M.D./Ph.D. students must meet with the Director of Graduate Studies (DGS) in Public Health if they are considering affiliating with Public Health. Students in this program are expected to meet the guidelines listed below in the timeframe outlined. The DGS must approve any variations to these requirements.

Teaching

One term of teaching is required. If students teach beyond this requirement, they can be compensated. If a student has served as a teaching fellow elsewhere on campus, this experience may be counted toward the requirement. DGS approval is required to waive the teaching requirement on the basis of previous Yale teaching experience.

Rotations/Internships

Students should do two rotations/internships with potential advisers in Public Health. The purpose of these rotations/internships is to learn lab technique and/or to allow the student time to determine if the PI’s research interests are compatible with the student’s research interests. These rotations/internships are usually done during the summer between the first and second years of medical school course work. In some cases, students may need to defer this requirement until the summer after the second year after taking certain courses and/or completing readings in order to possess the background necessary for a successful rotation/internship.

Required Course Work

M.D./Ph.D. students are generally expected to take the same courses as traditional Ph.D. students. Departmental requirements may vary; therefore students should confer with the DGS and their Ph.D. adviser.

Timeline for Qualifying Exam

Students generally will take medical school courses in years one and two. Students can take Public Health doctoral courses in years one and two before they affiliate if scheduling allows. Once affiliated with the Public Health program, students will complete all course requirements for the department. This generally takes a minimum of two terms but can take up to four terms after affiliating with Public Health. The qualifying exam is commonly completed after the fourth term of affiliation with the Ph.D. program in Public Health but can sometimes be done earlier with approval of the Ph.D. adviser and DGS.

Prospectus Timeline

Following completion of the qualifying exam, students should focus on the prospectus, which has to be approved by the Public Health Graduate Studies Executive Committee (GSEC) before the end of their sixth term as an affiliated Ph.D. student in Public Health.

Admission to Candidacy

To be admitted to candidacy, students must: (1) satisfactorily complete the course requirements for their department as outlined above, achieve grades of Honors in at least two full-term courses, and achieve an overall High Pass average; (2) obtain an average grade of High Pass on the qualifying exam; and (3) have the dissertation prospectus approved by the Graduate Studies Executive Committee. All Ph.D. students must be admitted to candidacy before the start of their fourth year in the Ph.D. program (i.e., before the start of the seventh term).
Ph.D. or terminal M.S. degree program materials are available upon request to the Office of the Director of Graduate Studies (c/o M. Elliot), School of Public Health, Yale University, PO Box 208034, New Haven CT 06520-8034; 203.785.6383; e-mail, melanie.elliot@yale.edu.

REQUIRED COURSES

For a complete list of Public Health courses, see the School of Public Health bulletin, available online at http://bulletin.yale.edu; and Online Course Information (OCI) at https://students.yale.edu/oci.

All Ph.D. students are required to take the following courses. Students entering the program with an M.P.H. may be exempt from EPH 608.

**EPH 600a, Research Ethics and Responsibility**  Christian Tschudi
This course seeks to introduce major concepts in the ethical conduct of research and some of the personal and professional issues that researchers encounter in their work. Sessions are run in a seminar/discussion format. Prerequisite: doctoral student or postdoctoral status only.  0 Course cr

**EPH 608b, Frontiers of Public Health**  Albert Ko
This course is designed for Ph.D. and Advanced Professional M.P.H. students. It explores the major public health achievements in the last century in order to provide students with a conceptual interdisciplinary framework by which effective interventions are developed and implemented. Discussions examine the advances across disciplines of biomedical research, epidemiology and biostatistics, environmental and behavioral sciences, and health policy and management services that led to these major public health achievements. The course examines global and national trends in the burden of disease and underlying determinants of disease, which pose new challenges; and it covers new approaches that are on the forefront of addressing current and future public health needs.