

DrPH PROGRAM

DrPH Degree Program

PROGRAM DESCRIPTION

The DrPH Program educates senior level professionals in the biomedical sciences, behavioral sciences, epidemiology and biostatistics, legal, economic and social issues, engineering technologies, management concepts and communication skills. DrPH graduates are leaders and innovators in environmental health sciences in local, regional, national and international settings. They analyze and assess complex environmental risks and problems and design and implement intervention strategies that reduce risks and resolve environmental problems. DrPH graduates are highly skilled practitioners who can comprehend and integrate the many dimensions of environmental health sciences, define the disciplines that can best be applied to a problem, make sound and critical judgments, implement proactive change in industry, government and academia.

Degree Requirements

For the DrPH program, the School of Public Health defines a set of minimum requirements, upon which EHS can impose additional requirements. It is the student's responsibility to know and understand these requirements. In general, the requirements include a minimum of 64 units of formal course work (see DrPH required course list in this handbook), a written comprehensive examination, preliminary departmental and School-wide oral examinations, an acceptable thesis, and a final oral examination. School requirements for the DrPH degree are discussed in the DrPH program's PPM on Academic Programs - 3, which can be obtained on-line at: <https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/Pages/default.aspx>.

While this handbook can summarize key parts of the DrPH program and its requirements, the PPM is the authoritative source for the program.

For issues regarding modification and waiver of School DrPH requirements, approval must first be obtained from the advisor, the EHS DrPH Program Director, the Department chair, and finally, the School's DrPH Program director. For issues regarding EHS requirements, the process is the same but does not require DrPH Schoolwide program approval. All waiver requests and approvals must be forwarded to the EHS Academic Programs Manager's office.

Academic Plan

During the first term, every DrPH student must design an individual academic that fulfills formal course work requirements. This academic plan will also identify additional courses that are appropriate for the student, given the student's interests and future career goals. The academic plan must be approved by the advisor and the EHS DrPH Program Director. Waivers of program requirements must be approved by the advisor, the EHS DrPH Program Director, and the School-wide DrPH Committee. The academic plan is a very important tool that is used to guide the course work and thesis requirements for DrPH students. Amendments are allowed and are approved in the same way as the original Academic Plan.

The academic plan must describe career goals, the competencies required for those career goals, the courses that must be taken to achieve the stated competencies, and how the thesis and other experiences will contribute to the career goals and competencies.

Part-time Status

The program encourages both the recruitment of practicing professionals and the ongoing involvement of DrPH candidates with health agencies and organizations. A student may request part-time status by developing and presenting a sound academic plan for degree completion to their advisor and the EHS DrPH Program Director. Upon approval, the student's status would be updated to part-time.

Part-time status may be requested at anytime during a full-time student's academic career. DrPH students in part-time status have up to nine academic years to complete the program and must register on a continuous basis for a minimum of 1 unit per term.

Employer-Department-Student Relationship

If the student chooses to seek employment or remain employed in a public health position during his/her academic career, the candidate and his/her advisor should discuss the academic plan with the employer. The candidate must work with the advisor and the employer to plan work schedules and academic plans to avoid delays in completion of the degree program. In addition, the student must obtain consent if they intend to use the employer's data and acquire all IRB or other approvals to conduct research.

ORAL AND WRITTEN EXAMINATIONS AND PROCEDURES

Written Comprehensive Examination: The comprehensive written examination is taken when the student completes his/her required coursework, generally 12-18 months into the full-time program. In order to be eligible to sit for the comprehensive written examination, the student must have a grade point average of 2.75 or better.

Scheduling: The exam will be offered at least once a year and is scheduled by the EHS DrPH Program Director. Generally, comprehensive written exams are given in June and December. Students with special circumstances may request an alternate administration, with approval of the advisor and DrPH Program Director. It is strongly advised that the student focus full time on the examination during the examination period, and scheduling competing activities for this period is highly discouraged.

Examination Content: The written comprehensive examination focuses on testing concepts and fundamental knowledge that all DrPH graduates of the Department of Environmental Health Sciences are expected to master. Examinations generally cover five broad topical areas:

1. Policy frameworks for national and international standards
2. Evaluation of the weight of scientific evidence (epidemiology, toxicology, study design, research strategy and statistics)
3. Risk Assessment, Risk Management and Risk Communication
4. Knowledge of principles of exposure assessment, including pollution sources, pathways, interventions and practices; and
5. Environmental health program development, planning, implementation and management.

Questions will be structured to discern the student's knowledge of environmental health and ability to integrate concepts across all environmental health disciplines. In addition, the exam will be designed to test students' comprehension of epidemiology, biostatistics, social and behavioral health, law and regulations, health policy and management, and leadership.

Responsibilities: In conjunction with the EHS DrPH committee, the EHS DrPH Program Director coordinates writing, administering, grading, and scoring the examination. Traditionally, the EHS program director has selected several faculty members of the EHS DrPH committee as grading faculty. Additionally, it is the responsibility of the EHS DrPH Director to furnish complete documentation of the examination and passing status to the Registrar, the student, and the student file (EHS Academic Programs Manager file).

Grading: Each of the assigned DrPH Committee faculty will independently grade the examinations, scoring questions that they feel sufficiently qualified to judge, using the criteria set out below as a guide:

Criteria for Evaluation of DrPH Written Comprehensive Examinations
Score Definition

100 Superb: Response is thorough, complete, and correct; beyond expectation. This is a rare and exceptional grade.

90-99 Excellent: Response is thorough, complete and correct with only very minor errors or omissions.

80-89 Very good: Response thoroughly covers the major facets of the question but lacks rigor and completeness with respect to details.

70-79 Good: Response adequately covers most of the major facets of the question but lacks rigor and completeness with respect to details.

60-69 Poor: Response covers correctly and completely some of the content/ principles but with some major omissions. Response is incomplete and carelessly prepared.

<60 Failure: Response is incomplete and incorrect. Unacceptable.

Criteria for Passing: The scores assigned by DrPH grading faculty will be averaged for each question. In order to pass the examination without conditions, the student must receive an average score of 70 or greater on each question. A student failing one or two questions shall be assigned a conditional pass. Students receiving a conditional pass shall be required to carry out additional work. The EHS DrPH Committee will evaluate the type and nature of additional work needed for the student to pass the examination without conditions. A student failing more than two questions on the examination is considered to have failed the entire examination and must retake it.

If the student fails the written comprehensive examination, the student can either withdraw from the DrPH program or retake the examination. Only one reexamination is permitted. A student failing to pass a second examination shall be automatically removed from the EHS DrPH program.

Communication of Results: The EHS DrPH Program Director and the student's advisor are expected to communicate the results of the examination to the student, the EHS Academic Programs Manager and the Office of the Registrar. As a part of this communication, the advisor or DrPH program director can review the answers to the examination with the student.

Departmental Preliminary Oral Exam

All DrPH students of the Department of Environmental Health Sciences are required to pass a departmental oral exam as a prerequisite for taking the School-wide Preliminary Oral Examination. This exam provides an opportunity for the student to demonstrate effective verbal communication skills and the ability to engage in scientific exchange.

The following process is usually followed for the examination but students should consult with their advisor about specific expectations, including faculty who should be in attendance. The examining committee comes predominantly from EHS, but must include at least one faculty member from outside the department. It is the responsibility of the student to arrange a time and place for the examination. A written notice of the date and time of the exam along with a copy of the research proposal must be submitted to the committee at least two weeks in advance of the examination. The student bears overall responsibility for arranging the examination and ensuring that the required number of faculty will be in attendance.

During the oral examination, the student presents his/her proposal and fields questions to determine whether he/she is adequately prepared to conduct the research outlined in the proposal. Questioning continues until all faculty members have had the opportunity to ask questions and are satisfied that the questioning has been completed. At the conclusion of the examination, the student will be excused from the room and the faculty will vote to pass or fail the student. If more than one faculty member votes fail, the student will be considered to have failed the exam.

If the student does not pass the exam, he/she may have an opportunity to retake the exam at the discretion of the examining committee. The committee can agree to a conditional pass and

define the conditions that must be fulfilled in order to obtain a pass. The committee chair will submit a brief report summarizing the decision of the committee to the EHS Academic Programs Manager. This information will be included as part of the student's official EHS file.

DrPH SCHOOL-WIDE PRELIMINARY ORAL EXAMINATION

The DrPH School-wide Preliminary Oral Examination determines whether the student has both the ability and knowledge to undertake significant research in his/her specialized area of interest. It is required of all DrPH students.

The exam must be taken no later than the end of the student's third year in residence, and before significant engagement in dissertation research.

This exam is different from a Departmental Preliminary Oral Examination, which is also required.

The student and his/her advisor are responsible for initiating arrangements for this examination. The departmental Academic Programs Manager will assist with the appropriate forms and other important information. Requests for the exam must be sent to the Office Records and Registration at least four weeks prior to the examination.

The committee shall consist of five voting members. Not more than three members of EHS can serve, and one of these must be the thesis advisor. A minimum of three Departments of the University, at least two being from the School of Public Health, must be represented. At least one member must hold neither a primary nor joint appointment in EHS. A full-time faculty member from outside EHS will normally serve as chairperson and must hold the rank of Full or Associate Professor at The Johns Hopkins University. The fifth member on the preliminary oral committee must have professional practice experience related to the public health problem addressed by the student.

The fifth member is not necessarily a faculty member of The Johns Hopkins University, and will be approved to serve on the Committee by the School-wide DrPH Program Director, based on a submitted Curriculum Vita.

The Committee member fulfilling this practice experience must be explicitly designated on examination forms. Two faculty alternates will be designated—one from inside and the other from outside the Department. Each must have a current appointment as Assistant Professor or higher in the JHU Department or program. A third alternate with professional experience may also need to be designated if neither of the first two alternates fulfills this requirement.

Immediately following the examination, the committee evaluates the success or failure of the student by a closed ballot prior to any discussion. If the student fails the exam and is permitted a reexamination, he/she must be reexamined within one year.

All DrPH students are required to prepare a thesis proposal for use during the oral examination. This proposal typically consists of a description of the specific aims of the proposed research, the appropriate background and significance, proposed design and methods, and any preliminary data in-hand before the oral examination. The thesis format can take the form of a traditional thesis or publishable manuscript option, described below.

Thesis Research Committee

Soon after the student selects his/her thesis advisor, generally around the time of the preliminary oral examination and before the preparation of the thesis proposal, a Thesis Research Committee will be constituted. This committee consists of the thesis advisor and at least two other faculty members, from inside or outside of the EHS Department; a part-time adjunct faculty member or a non-faculty member may serve as one of the members of this committee.

These other individuals may be different from those who will later serve as thesis readers and/or members of the Thesis Readers Committee (see below). Their function will be to facilitate the progress of the student in the completion of his/her thesis project, to assist the thesis advisor in providing suggestions and critical feedback to the student, and to provide a measure of consistency and continuity for the student. Membership of the Dissertation Advisory Committee may change as dictated by the needs of the student and the direction of the research.

The Thesis Committee will meet with the student at least twice a year from the time of the preliminary oral examination until the final defense. The thesis advisor will forward a brief written report of these meetings, with recommendations to the EHS Academic Programs Manager. A copy of this report will be given to the student. These reports will be used by departmental administration to review student progress during the research period of the student's program, and will demonstrate continued eligibility for student support, if applicable.

Thesis Readers Committee

The composition of the DrPH Thesis Readers Committee includes at least one reader other than the advisor having professional practice experience related to the public health problem addressed in the dissertation. This reader, who may or may not hold a faculty appointment with the University, shall be identified to the Office of Records and Registration during the process of constituting the committee and will be approved to serve on the committee by the School's DrPH Program Director, based on a submitted Curriculum Vita. The committee member fulfilling this practice experience must be explicitly designated on examination forms.

Please refer to the DrPH Policies and Procedures Manual (PPM: <https://my.jhsph.edu/resources/policiesprocedures/ppm/Pages/default.aspx>) regarding policies relating to the thesis and final oral exam. The EHS Academic Programs Manager can assist with the identification of deadlines and completion of necessary forms.

Publishable Manuscripts Option

Doctoral students have the option of submitting publishable manuscripts as an alternative to the traditional dissertation. The publishable manuscript option is often preferred as it offers the opportunity to develop skills in scientific or professional journal preparation.

A manuscript-oriented dissertation must meet the following criteria:

1. Two manuscripts must be linked to a common theme.
2. The doctoral student must be the first author on the two manuscripts.
3. A manuscript will not be accepted as part of the dissertation if it is submitted before the student's dissertation topic is approved by the Thesis Research Committee. All manuscripts to be submitted must have been reviewed by members of the Thesis Research Committee.
4. The manuscripts must be found acceptable for publication according to the internal peer review process.
5. The dissertation, which includes two (or more) publications, should be organized as follows. The body of the dissertation should include a series of at least two papers that are linked to a common theme (i.e., the student's dissertation topic). The first chapter should be a comprehensive critical literature review suitable for publication. Chapters two and three (and possibly four) are the papers with a transitional short chapter between each relating one to the other. The final chapter should integrate and discuss the findings reported in the papers. It should include a discussion of the conclusions and environmental health implications of the findings of the research.
6. The dissertation should include an appendix outlining in detail the study methods and any accompanying data tables deemed necessary to fulfill School policies.

DATA COLLECTION AND LABORATORY EXPERIENCE

Although the Department of Environmental Health Sciences has strong laboratory based research efforts, neither laboratory research nor the de novo collection of data is a requirement of the DrPH thesis.

Many DrPH students are mid-career professionals working for governmental or industrial organizations in areas relevant to environmental health. It is anticipated that a number of research proposals and their associated investigational and/or developmental endeavors will involve an extension of these professional activities. The proprietary nature of the data collected in these situations and the uniqueness of the data collection to the student's proposal will be closely scrutinized and evaluated by the program.

All DrPH students proposing research on humans or animals must follow these procedures: Before beginning contact with either human or animal subjects, doctoral students as all researchers, must obtain the appropriate approval for their projects from either the Institutional Review Board (IRB) or the Institutional Animal Care and Use Committee (IACUC). In both cases, the faculty mentor must be involved in this process in that the protocol for the research project is submitted under the faculty member's name with the student listed as a student investigator. It is important to remember that NO contact can be made with humans, human tissue, human samples or human records without prior approval of the protocol by the IRB. In addition, online training in the use of animals in research, human subjects research and HIPAA Privacy Rule must be completed. NO animals can be purchased for experimentation without an IACUC protocol approval.

Detailed information about this can be found at:

Human Subjects: <http://www.jhsph.edu/GER/IRB/completestudentmanual.pdf>

Animals: <http://www.jhsph.edu/GER/research/AnimalWelfare.html>

SEMINARS AND JOURNAL CLUB OPPORTUNITIES

Seminars and meetings are held, usually during lunchtime, especially for DrPH students. Topics focus on the analysis of public health problems. The seminar presentations feature student and faculty research, discussions by environmental health practitioners, and other presentations relevant to environmental health problem-solving. In addition to seminars offered by the academic divisions and programs, the Department's Research Enrichment Committee also offers monthly departmental seminars that focus on research topic areas that span the interests of the Department. All EHS students, fellows and faculty are invited.

School-Wide DrPH Course Requirements AY 2011 – 2012

School-wide DrPH Curriculum Checklist

The following sections describe the school-wide course requirements. For specific department requirements please contact your departmental academic coordinator. DrPH students are also responsible for meeting the MPH core requirements in environmental health, public health biology, management sciences, and the social and behavioral sciences.

I. Ethics--DrPH students must take at least 1 credit of research ethics and at least 2 credits of practice/management/policy ethics from the following courses. Please note: DrPH students who receive NIH funding are required to take either 550.600 or 306.665 as part of their ethics requirement.

Course No.	Units	Course Title	How fulfilled or waiver
550.600 OR	1	Responsible Conduct of Research	
550.860.82	1	Research Ethics	
221.616	2	Ethics of Public Health Practice in Developing Countries	
306.655	3	Ethical Issues in Public Health	
306.663	3	Legal and Ethical Issues in Health Services Management	
306.665	3	Research Ethics and Integrity: US and International Issues	
306.625	3	Ethical Issues in Health Policy: Public Health and Health Care	

II A. Epidemiology-- DrPH students must take either Option IIA or Option IIB below. Option IIA consists of either 340.601 or 550.694.81 and 550.695.81 plus ANY additional epidemiology course. Option IIB includes all three courses listed.

Course No.	Units	Course Title (credits)	How fulfilled or waiver
340.601 OR	5	Principles of Epidemiology	
550.694.81 AND	3	Fundamentals of Epidemiology I (on-line only)	
550.695.81 AND	3	Fundamentals of Epidemiology II (on-line only)	
		One additional course in Epidemiology	

II B. Epidemiology continued

Course No.	Units	Course Title (credits)	How fulfilled or waiver
340.751 AND	5	Epidemiologic Methods 1	
340.752 AND	5	Epidemiologic Methods 2	
340.753	5	Epidemiologic Methods 3	

**School-Wide DrPH Course Requirements
AY 2011 – 2012**

III A. Biostatistics--DrPH students must take all 4 of the following courses OR all listed in III B.

Course No.	Units	Course Title (credits)	How fulfilled or waiver
140.621** <u>AND</u>	4	Statistical Methods in Public Health I	
140.622** <u>AND</u>	4	Statistical Methods in Public Health II	
140.623** <u>AND</u>	4	Statistical Methods in Public Health III	
140.624	4	Statistical Methods in Public Health IV	

****The Biostatistics series 140.651 – 654 may be used as a substitute.**

III B. Biostatistics continued

Course No.	Units	Course Title (credits)	How fulfilled or waiver
140.611	3	Statistical Reasoning in Public Health I	
140.612 <u>AND</u>	3	Statistical Reasoning in Public Health II	
140.613	4	Data Analysis Workshops I	
140.614 <u>AND</u>	4	Data Analysis Workshops II	
140.620 <u>AND</u>	2	Advanced Data Analysis Workshop	
140.624	4	Statistical Methods in Public Health IV	

IV. School-Wide DrPH Seminar: DrPH Students are required to attend eight sessions of the School-wide DrPH Seminar and are encouraged to attend all sessions.

Course No.	Units	Course Title (credits)	How fulfilled or waiver
No course number	0	DrPH School-wide Seminar	

V. Leadership: DrPH Students must take one of the following courses:

Course No.	Units	Course Title (credits)	How fulfilled or waiver
551.610.01 <u>OR</u>	3	Foundations of Leadership – A Leadership Survey Course	
380.681.01	6	Strategic Leadership Principles and Tools for Health System Transformation in Developing Countries	

School-Wide DrPH Course Requirements AY 2011 – 2012

VI. Health Policy--DrPH students must take at least one policy course from the following: (other courses may be substituted with approval from the DrPH Executive Committee)

Course No.	Units	Course Title (credits)	How fulfilled or waiver
180.628.81	4	Introduction to Environmental and Occupational Health Law	
180.629	4	Environmental and Occupational Health Law and Policy	
221.650	3	Health Policy Analysis in Low and Middle Income Countries	
300.600.81	4	Introduction to Health Policy (internet)	
300.652	4	Politics of Health Policy	
300.712	3	Health Policy II: Public Health Policy Formulation	
306.650	3	Public Health and the Law	
308.602	3	Role of Government in Health Policy	
380.624	4	Maternal and Child Health Legislation and Programs	
380.665	4	Family Planning Policies and Programs	

VII. Management Sciences; DrPH students must take 3 credits from the following courses in addition to the MPH Management requirement:

Course No.	Units	Course Title (credits)	How fulfilled or waiver
221.706 and 221.707	5	Management of Health Systems in Developing Countries I & II	
221.722 OR 221.722.81	4	Quality Assurance Management Methods for Developing Countries	
312.615	3	Organizational Behavior and Management	
551.601 AND 551.602	6	Managing Health Services Organizations; Approaches to Managing Health Service Organizations: Cases and Applications	
551.603	3	Fundamentals of Budgeting and Financial Management	
551.605	3	Case Studies in Management Decision Making	
551.608	3	Managing Non-Governmental Organizations in the Health Sector	

**Department of Environmental Health Sciences
 Doctor of Public Health (DrPH) - Academic Year 2011-12
 School-Wide Requirements**

Departmental Requirements

Students must take at least six courses in the Department. Most students meet this requirement easily, as eleven courses in the Department are required (five courses, four specialty courses, and two specialized epidemiology courses). Of these ELEVEN courses, no more than FOUR may be waived. In addition to these course requirements, DrPH students are required to attend all divisional and relevant departmental seminars.

Core Departmental Course Requirements

The Department of Environmental Health Sciences has the following requirements for all DrPH students in the Department. Of the five core courses, no more than TWO can be waived with the approval of the advisor and EHS DrPH Director.

Course Number	Units	Course Name	How Fulfilled or Waiver
180.609	4	Principles of Environmental Health I <i><u>AND</u></i>	
180.610	4	Principles of Environmental Health II <i><u>OR</u></i>	
180.601	5	Environmental Health	
180.629	4	Environmental and Occupational Health Law and Policy	
182.625	4	Principles of Occupational and Environmental Hygiene	
187.610	4	Public Health Toxicology	
188.680	3	Fundamentals of Occupational Health	

(continued on next page)

Doctor of Public Health (DrPH) - Academic Year 2011-12 School-Wide Requirements (cont'd)

Specialty EHS Courses

In addition to required courses, at least four of the departmental or other EHS DrPH-related courses are also required. Of the four courses that must be taken, no more than two can be waived with the approval of the advisor and the EHS DrPH Program Director.

Sample Specialty EHS Courses with Occupational Concentration

Course Number	Units	Course Name	How Fulfilled or Waiver
182.621	4	Introduction to Ergonomics	
182.623	3	Occupational Safety and Health Management	
188.681	5	Occupational Health	
188.686	3	Clinical Environmental and Occupational Toxicology	
188.694	3	Occupational Health and Vulnerable Worker Populations	

Sample Specialty EHS Courses with General Environmental Health Concentration

Course Number	Units	Course Name	How Fulfilled or Waiver
180.611	4	The Global Environment and Public Health	
180.631	3	Environmental and Occupational Health Policy Seminar	
182.640	3	Food- and Water-Borne Diseases	
183.641	3	The Health Effects of Indoor and Outdoor Air Pollution <i>(Note: Every other year)</i>	
305.607	4	Public Health Practice	

Specialized Epidemiology Courses

In addition to required and specialty courses, **ONE** of the following epidemiology courses are required:

Course Number	Units	Course Name	How Fulfilled or Waiver
180.640	4	Molecular Epidemiology and Biomarkers in Public Health	
340.680	4	Environmental and Occupational Epidemiology	

* Check current schedule for all course and/or lab times:

<http://commprojects.jhsph.edu/courses>

** **Also offered Online** Note: Courses offered online require students to establish an eLearning account and to complete the free "Introduction to Online Learning" course prior to the term in which the course is taken.

For instructions go to:

<http://distance.jhsph.edu/iol/>

In addition, all students are required to complete the Academic Ethics Module (online course), which is located at:

<https://apps4.jhsph.edu/academicethics>

This module should be completed within two terms of matriculation and must be completed before graduating.