



Columbia University
MAILMAN SCHOOL
OF PUBLIC HEALTH

**DEPARTMENT OF ENVIRONMENTAL
HEALTH SCIENCES**

**MAILMAN SCHOOL OF PUBLIC HEALTH
COLUMBIA UNIVERSITY**

**STUDENT HANDBOOK
DrPH PROGRAM IN EHS
2013 - 2014**

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DrPH Program

The Doctor of Public Health (DrPH) in Environmental Health Sciences is an academic degree that prepares candidates for independent research, management, and teaching in the area of environmental risks to human health. The DrPH program is designed for candidates with a prior degree, typically an MPH, who are interested in advancing their careers, particularly in research and policy positions within a specialized field of environmental health sciences. The program shares similar competencies as the PhD program.

Each candidate will be required to demonstrate competence in the fields of environmental toxicology or environmental molecular epidemiology, with a focus on such areas as carcinogenesis, respiratory health, neurotoxicity or other areas of EHS faculty expertise. Candidates will work closely with a faculty advisor in his or her specialty area.

Our graduates pursue work primarily in government agencies that develop environmental policy, private and public institutions involved with health and safety, and non-governmental organizations that study the effects of environmental exposures on human health. Some graduates pursue careers in academia. All EHS DrPH graduates are well-prepared for leadership roles within their chosen specialty area of this field. In administering the Doctoral Program, the Department is governed by the Guidelines for the Doctor of Public Health Degree prepared by the Standing Doctoral Committee of the School. [Doctoral Degree Handbook](#)

Career Options

The career paths of our graduates vary and include, among others:

- Senior roles in research, management, or data analysis at governmental regulatory agencies at the local, state, national, and international levels;
- Researchers within industries, including pharmaceutical companies;
- Leadership/senior roles at government organizations involved in environmental and health protection, such as the Environmental Protection Agency (EPA), health departments, and the Centers for Disease Control (CDC);
- Consulting firms;
- Community-based organizations concerned with health issues related to environmental pollutants;
- Non-governmental organizations involved in developing and advocating for sound environmental policy;
- Faculty positions in academic institutions.

Competencies

The DrPH degree in EHS is designed to train candidates for advanced research, teaching and administrative positions in the area of environmental health sciences. There are multiple learning objectives that are part of the DrPH program, aimed at producing a well trained academic or researcher.

Upon satisfactory completion of the DrPH degree in EHS, graduates will be able to:

- Conceive, develop and conduct original research leading to practical applications in environmental health sciences;
- Apply the latest applied science methodologies for testing research hypotheses and solving practical problems in environmental health sciences;
- Communicate effectively in writing and orally the results of research findings to other professionals;
- Have the skills to develop a well conceived hypothesis and to create a written proposal aimed at acquiring funding for a project to test the hypothesis;
- Compose a research article for submission to a peer-reviewed, scientific journal;
- Report research findings at professional meetings;
- Summarize research findings for a non-technical audience;
- Identify significant gaps in the current applied knowledge in environmental health sciences and develop approaches for filling those gaps;
- And establish, organize and operate an independent applied research program in environmental health sciences.

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Admission requirements

To be considered for admission to the DrPH program, an applicant must have a Master of Public Health (MPH) degree (or its equivalent) from an accredited school of public health and satisfy additional admission requirements specific to the Mailman School of Public Health. As part of the application process, each applicant is asked to describe an area or areas of research interest in their personal statement. This enables the admissions committee to evaluate whether the applicant's interests match those of the faculty. Thus it is essential that applicants review the research interests of faculty prior to applying to the program. **Those applicants who have a clear intention of research interests that align with current EHS faculty will be considered favorably.** Additionally, successful students are those that thrive as self-directed and proactive learners. Potential applicants should contact the Associate Director of Academic Affairs, Nina Kulacki at njk2128@columbia.edu to discuss this program and to arrange a meeting with individual faculty with whom they may have an interest in working. The deadline for applications is **December 1st**.

Learn more about applying to the School or access our online application. [Online Application](#)

For additional information, please feel free to contact the Office of Admissions directly by email ph-admit@columbia.edu or by phone at 212-342-5127.

Course Requirements

Full-time DrPH candidates are expected to complete their course work in the first year. After the first year, students must maintain continuous enrollment status. Both part-time and full-time students are expected to enroll in Journal Club **every semester** while in the program, except for the final semester when they are writing their thesis. The process of selecting a research topic and faculty advisor should begin towards the end of the first year in the program, coinciding with taking courses. This time line is the same for P/T or F/T DrPH students. Part-time DrPH candidates are expected to take their courses in a timely fashion and will be reviewed on a bi-annual basis through academic review meetings. Whether full-time or part-time, candidates are expected to complete the program within 7 years.

Upon admission to the program, candidates meet with the Director of Educational Affairs and the Associate Director. At that time, information and recommendations will be offered regarding course work, qualifying examinations, and other academic issues during the candidate's first years in the program and beyond.

Candidates are eligible to take their Qualifying Examination **only after successfully completing 30 course credits**. Specific course requirements for the *Molecular Epidemiology Track* or the *Toxicology Track* follow.

Sample Curriculum for DrPH Program in the Molecular Epidemiology Track

The Molecular Epidemiology Track focuses on the molecular mechanisms that underlie epidemiological findings. This focus requires additional grounding in basic biology, including molecular biology and genetics. This is a distinguishing point between the Molecular Epidemiology Track within EHS as compared to the Epidemiology program within the Department of Epidemiology. Candidates in the Molecular Epidemiology track carry a relatively heavy course load that encompasses both relevant basic biology courses as well as considerable course work in epidemiology and biostatistics. Candidates take a full year of

Biochemistry and Molecular Biology, a course taught to all graduate students in the Medical School.

Molecular Epidemiology Track Curriculum	
Semester	Courses
Year 1 Fall	<ul style="list-style-type: none"> <input type="checkbox"/> P6385 Genetics and the Environment (for students w/o strong bio background) <input type="checkbox"/> P8319 Biological Markers of Chemical Exposure <input type="checkbox"/> P6104 Advanced Biostatistics (<i>requires a Placement Exam</i>) <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesdays from 4-5pm)
Year 1 Spring	<ul style="list-style-type: none"> <input type="checkbox"/> P8438 Epidemiology II Design and Conduct of Observational Epidemiology <input type="checkbox"/> P8307 Molecular Epidemiology <input type="checkbox"/> P8100 Applied Regression Analysis¹ <input type="checkbox"/> P8120 Analysis of Categorical Data² <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesdays from 4 – 5pm)
Year 1	<ul style="list-style-type: none"> <input type="checkbox"/> During the first year in the program, DrPH candidates need to explore the research interests of the faculty members of the Department and to meet with faculty that he/she has an interest in working with. This will allow them to choose an advisor and research project. The student needs to identify a Thesis Advisor by the end of their first year.
Year 1 Summer	<ul style="list-style-type: none"> <input type="checkbox"/> P8400 Epidemiology III Applied Epidemiologic Analysis³
Year 2 Fall	<ul style="list-style-type: none"> <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesdays from 4 – 5pm) <input type="checkbox"/> Any electives based upon individual interests needed to complete the required 30 credit minimum <input type="checkbox"/> Begin preparation for qualifying exam
Year 2 Spring	<ul style="list-style-type: none"> <input type="checkbox"/> P8322 Environmental Determinants of Human Health II (EHS Core may be audited prior to taking this course depending upon background).⁴ <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesday from 4 – 5pm) <input type="checkbox"/> Qualifying Exam may occur here
Year 2 Summer	<ul style="list-style-type: none"> <input type="checkbox"/> Qualifying Exam may also occur here
Post Year 2	<ul style="list-style-type: none"> <input type="checkbox"/> P9370 Journal Club every semester until thesis writing semester <input type="checkbox"/> Annual Seminar presentation (seminar meets Tuesday from 4 – 5pm) <input type="checkbox"/> Bi-Annual thesis committee meeting (can correspond with seminar but must be within 2 weeks of seminar presentation)
<p>¹This course is offered in fall, spring, and summer. P6104 is a prerequisite for this course. ²Offered in the fall and summer. P6104 is a prerequisite for this course. ³P8120 and P8438 are pre-requisites for this course. ⁴This course is not required but strongly recommended.</p>	

Sample Curriculum for Doctoral Program in the Toxicology Track

Candidates in the Toxicology Track are expected to take relevant biology courses that will prepare them for their laboratory-based thesis work. Candidates take a full year of Biochemistry and Molecular Biology, a course taught to all graduate students in the Medical School.

Toxicology Track Curriculum	
Semester	Courses
Year 1 Fall	<ul style="list-style-type: none"> <input type="checkbox"/> P8312 Fundamentals of Toxicology <input type="checkbox"/> P8313 Toxicokinetics <input type="checkbox"/> P6385 Genetics and the Environment <input type="checkbox"/> 2 electives <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesdays from 4 – 5pm)
Year 1 Spring	<ul style="list-style-type: none"> <input type="checkbox"/> P8438 Epidemiology II design and conduct of Observational Epidemiology <input type="checkbox"/> P8308 Molecular Toxicology <input type="checkbox"/> P8322 Environmental Determinants of Human Health II (EHS Core may be audited prior to taking this course depending upon background).¹ <input type="checkbox"/> 1-2 electives <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Select thesis advisor
Year 1	<ul style="list-style-type: none"> <input type="checkbox"/> During the first year in the program, DrPH candidates need to look into the research interests of the faculty members of the Department and to meet with those with whom the student has an interest in working. This will allow them to choose an advisor and research project. The candidate needs to identify a Thesis Advisor by the end of their first year.
Year 2 Fall	<ul style="list-style-type: none"> <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesday from 4 – 5pm) <input type="checkbox"/> Any electives based upon individual interests needed to complete 30 credits <input type="checkbox"/> Begin preparation for qualifying exam
Year 2 Spring	<ul style="list-style-type: none"> <input type="checkbox"/> P9370 Journal Club <input type="checkbox"/> Weekly Doctoral Seminar (Tuesday from 4-5pm) <input type="checkbox"/> Qualifying Exam should occur in this semester
Post Year 2	<ul style="list-style-type: none"> <input type="checkbox"/> P9370 Journal Club (every semester until thesis writing semester) <input type="checkbox"/> Annual Seminar presentation (seminar meets Tuesdays from 4 – 5pm) <input type="checkbox"/> Bi-Annual thesis committee meeting (can correspond with seminar but must be within 2 weeks of seminar presentation)
¹ This course is not required but strongly recommended	

Journal Club in Environmental Health Sciences (P9370 for 1 credit)

All DrPH candidates ***must attend Journal Club every semester***- except during the final semester(s) when they are committed to composing their theses.

Doctoral candidates will be required to read primary research papers and present a critical review of their readings. The goal of this course is to teach students to present and debate informative, challenging, and current topics from the scientific literature. Each semester the course topic relates to a specific area of study in environmental sciences. The specific topic is chosen each semester by the course instructor. Some sample topics include: the effects of ozone depletion on cells; asthma in the urban environment; recent advances in the use of biomarkers in predicting cancer; health effects of heavy metals in the environment; population epigenetics; water borne pathogens and disease.

Academic Honesty & Honor Code: All Mailman students are expected to adhere to the required standards for academic and scientific integrity. Please review the new information on “Turnitin” via the link below. These can be found in the OSA Student Handbook statement on Academic Honesty:

[Honor Code of Academic Integrity](#)

Information on Grant Writing Course:

Grant writing courses are detailed on the link below.

[Grants Course](#)

Elective options

To compliment the candidate’s required coursework, there are possible electives for either track. This is not a comprehensive list, rather it is a starting point based upon selections of prior students. Please refer to the Director of Educational Affairs, the Associate Director and other DrPH candidates in the program for additional possibilities.

- P8111 Linear Regression Analysis¹
- P8371 Public Health GIS
- P8157 Analysis of Longitudinal Data²
- W4799 Molecular Biology of Cancer
- W4004 Neurobiology: Cellular and Nuclear
- M9780 Grant Writing Course
- G4150 Cellular Molecular Biophysics
- P8304 Public Health Impacts of Climate Change
- P9317 Case Studies in Risk Assessment and Environmental Policy

¹ P8104, Probability and P8109, Statistical Inference are prerequisites for this course. Please contact the teaching faculty member directly if you feel that you have the appropriate background to waive these courses.

² P8109, Statistical Inference and P8111, Linear Regression Models are prerequisites for this course.

Registration

DrPH Continuous Registration Policy: RSRH P0001, RSRH P0002, RSRH P0003

After completing coursework and while preparing the dissertation, a candidate must be continuously enrolled at the University and within the program of study. Students must register for one tuition point in all fall and spring semesters in which they are not otherwise registered for course credits. The 1 tuition credit point is satisfied in EHS through P9370 Journal Club. In addition, all candidates must **also register for a non-credit, no charge continuous registration, RSRH P0002 or RSRH P0003 until the semester of defense^^.**

- Students who want health insurance should register for RSRH P0002. This registration provides students with F/T status and includes an automatic health insurance fee.
- Students who **do not** want health insurance should register for RSRH P0003. RSRH P0003 is intended for part-time status so students should register for no more than 5 credits of course work along with this course. (*You must also register for Journal Club*).
- ^^In the last semester, all students should register for RSRH P0001, a zero credit course which carries one tuition credit and a full-time status. In that final semester, all students who do not want health insurance must manually request to drop the insurance. (*You do not need to register for Journal Club in your last semester*).

Candidates are expected to complete the dissertation in two or more semesters. (*The entire Doctoral Program must be completed within seven years.*)

Steps to waive insurance: From the Mailman SPH webpage, click on Student Health Services, then click Insurance and Dental, then on Waive Coverage, and lastly follow the appropriate link "click here to waive" on the lower half of the page.

[Student Health Services Insurance Waiver](#)

Registration Procedures

To view the latest registration information, please see the Mailman School course listings: [Course Listings](#).

This site also typically includes prior semester course history. At designated times during the semester, DrPH candidates are able to register through Student Services Online (SSOL) for their classes the following semester.

Change of Program: The first two weeks of each semester are designated Change of Program period. Please refer to the Mailman School of Public Health Academic Calendar for the exact dates: [Academic Calendar](#). During this time, students are permitted to add any new class to their program without penalty. A late registration fee is charged for any class added after the change of program period has passed.

Cross Registration Policies: Candidates interested in cross-registration at another Columbia University school need two types of permission. First, they must obtain their advisor's signature in order to verify that they have approval to apply this course to their degree program. Second, they must obtain permission from the school that offers the course – in order to secure a space in the course. It is important to note that the process of obtaining permission to enroll in a course as a cross-registrant is overseen by the other school (not the Mailman School). Often, but not always, the other school provides a physical form that tracks this permission. Permission might rest with the instructor or the student affairs office at that school, or both. **It is important**

for the candidate to contact the school about its process and how to obtain permission to enroll in a course.

After obtaining permission, candidates must bring this information, along with a registration form to the CUMC Registrar during the change of program period. The [form is available online](#).

However, registration must be done in person at the Office of the Registrar, since candidates cannot add or drop non-public health courses online.

Add/Drop: After the add/drop period, which is typically about two weeks, candidates will need approval from both their advisor and the Office of Student Affairs to drop courses. Approved forms must be brought to 1-141 Black Building to be processed.

[Add/Drop Form](#)

Program changes must be made in person. No adjustment of tuition will be made for any course dropped after the last day of the change of program period. There is also a date in the Academic Calendar after which courses may not be dropped.

Failure to attend classes or unofficial notification to the instructor does not constitute dropping a course and will result in a grade of UW (unofficial withdrawal). Courses can be dropped only through the change-of-program procedure described above.

School Policy on Incomplete Grades: Candidates who have received a grade of incomplete (IN) have one year from the end of the semester of registration to complete the work. Additionally, candidates must complete an [incomplete form](#) that is filed with the Office of Student Affairs to confirm the incomplete status.

Unless there is notification of change of grade from incomplete to letter grade the incomplete will automatically be converted to unofficial withdrawal (UW), defined as "student did not complete attendance and/or assignment, but failed to withdraw." Under very special circumstances, an instructor may grant an extension, usually for a specified period of time that is not more than six months. A grade of "UW" will not be changed to a passing grade. In most cases a student will have to register again for the course to complete the requirement. UW results in no grade or loss of credit and no refund.

2013-2014 ACADEMIC CALENDAR:

[Academic Calendar](#)

Leaves of Absence & Readmission

Because of the continuous registration requirement, it is important for candidates to request Leaves of Absence in writing for any time that they will be away from the University. This may be for reasons of ill health, maternity or paternity leave, military service or other reasons deemed to be acceptable by the University. It is important to note that, if you do not officially request a leave of absence and do not register for a semester, not only must you apply for readmission to the University before registration is allowed, but you will also be billed for that semester at the *current* rate of payment before you are readmitted. This means that if you failed to register in 2013 without applying for an official leave of absence, and you apply for a degree in 2014, the University will charge you for the 2013 semester at 2014 rates before they will readmit you. This payment is called a variable reinstatement fee and is not considered to be a tuition payment by the University. To request a leave of absence, you should first write a letter of intent to the Chair of the Department for approval, with a copy to the Associate Director. For

further details and information regarding leaves of absence and readmission, consult the OSA Student Handbook: [Leaves of Absence](#).

Bi-Annual Progress Report

All EHS DrPH candidates are required to submit a progress report at the start of the academic year and then again at the start of the spring semester (see Appendix A). Each candidate must meet with either their advisor, or with the Director of Academic Affairs (Dr. Greg Freyer) and the Associate Director (Nina Kulacki) if they do not yet have an assigned advisor. Candidates should expect to hear from their primary and/or secondary advisors in August to set up a review meeting. Completed reports are to be submitted to the Director of Academic Affairs and a copy will be kept on file with the Associate Director of Academic Affairs.

In addition to the bi-annual review, candidates are expected to obtain a grade of **B or higher** in every course for which they are registered. If a candidate receives a grade below a B, this will be brought to the attention of the EHS Doctoral Committee and a review will take place to determine the circumstances behind the grade. If a student receives a second grade below a B they will be required to meet with the Doctoral committee, and, if deemed appropriate, could be asked to leave the program.

Pass/Fail Policy

DrPH candidates in MSPH doctoral programs may take no more than two elective courses for pass/fail, with the prior approval of the department. Individual departments may place further restrictions on pass/fail rules.

Teaching Requirement

All DrPH candidates must teach during their graduate training. Teaching consists of **one** of the following: 1) a Teaching Fellow (TF) role in one course for a semester, 2) providing a minimum of one lecture per year in a graduate course, typically in a course taught by the student's mentor, and 3) an equivalent effort that can be developed between the student, their advisor, and the Director of the DrPH Program, Dr. Greg Freyer. Although not required, it is highly recommended that DrPH students also provide support for at least one course throughout the tenure of the program for a learning and teaching experience.

For those students that would like more instruction on teaching methods, there are several support systems at the Mailman School and the University that are designed to help DrPH and PhD Candidates prepare for teaching. For support with teaching related efforts, contact the Graduate School of Arts & Sciences (GSAS) Teaching Center, located at 301 Philosophy. The GSAS Teaching Center is the source for practical advice about most aspects of teaching, including: course design, assessment, preparing a teaching philosophy, assembling a teaching portfolio, course management, and the innovative use of teaching. The Center can also be contacted by calling 212-854-1066. An additional resource is the Director of Educational Initiatives, Ms. Leah Hooper, lch2124@columbia.edu, who can provide assistance and support with an array of teaching preparation techniques and skills.

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Qualifying Examination

Written Proposal

Qualifying Examinations are to be completed and defended no later than after the **fall semester** in the beginning of the **third year, no later than December**. The qualifying exams are composed of one written proposal: the thesis proposal of the candidate, which is conceived in collaboration with the candidate's mentor, although the work is completed independently by the candidate. A one-page abstract of the proposal need to be submitted to the Chair of the Qualifying Exam Committee for approval prior to writing. Once approved, the candidate will have two months to complete and submit their written proposal.

As the qualifying exam will be testing the knowledge base of candidates within the overall field of EHS and Public Health and more specifically on their thesis topic area and coursework, candidates should anticipate a wide range of relevant questions from the committee members.

Format of the Proposal

The proposals should follow the current NIH guidelines for an R01 application. Guidelines can be found online at NIH.gov or through their advisor.

Abstract

The Abstract should be 30 lines of text or less, describing the purpose, significance and approach of the proposal and is **not** included in the page count.

Specific Aims

The candidate must list their broad, long-term objectives, as well as what the specific research proposed in this application is intended to accomplish (e.g., to test a stated hypothesis, create a novel design, solve a specific problem, develop new technology, etc.). This section should give a brief statement of purpose, a hypothesis to be tested and be followed by a series of 2-4 major aims that the candidate proposes to carry out in order to sufficiently test his/her hypothesis.

This section should not exceed 1 page. This does not count towards the page count.

Research Strategy—REVISED SECTION:

The page limit cannot exceed **12 pages** (for R01s; page limits for other grant types will vary. Please see the NIH Table of page limits for other grant mechanisms: [NIH Table of Page Limits](#)). This section includes the following new headings: **Significance, Innovation, and Approach.**

1. Significance:

This section should explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses. The section explains how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields. Also, describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

2. Innovation:

This section should explain how the application challenges and seeks to shift current research or clinical practice paradigms. Next, describe any novel theoretical concepts, approaches or methodologies, instrumentation or intervention(s) to be developed or used, and any advantage over existing methodologies, instrumentation or intervention(s). Finally, explain any refinements,

improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation or interventions.

3. Approach:

If you are including Preliminary Studies, put this information in the “Approach” Section. Then describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Include how the data will be collected, analyzed, and interpreted as well as any resource sharing plans as appropriate. Also, discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.

One outline candidates may consider for writing this section is listed above:

- Restate the specific aim
- Briefly explain the purpose of proposed studies
- Give experimental details and/or detailed study analysis
- Describe expected outcomes/anticipated results
- Disclose possible pitfalls
- Give alternative approaches

Literature Cited

The candidate must include full references with all authors and titles. **This section is not included in the page count.**

Examples of previous examinations/theses are available via the Associate Director of Academic Affairs, Nina Kulacki, [nj2128@columbia.edu](mailto:njk2128@columbia.edu).

Oral Defense of Proposal/Qualifying Exam Committee

It is the responsibility of the candidates to contact and collaborate with the Associate Director of Academic Affairs, Nina Kulacki, in setting the date of their oral Qualifying Examination. Once the time/date is confirmed, Ms. Kulacki will finalize the information and set a location, which must be done in conjunction with the candidate’s advisor and the members of the Examination Committee. The Committee is currently a standing committee of three (3) faculty members (Drs. Joseph Graziano, Matt Perzanowski and Greg Freyer), in addition to the candidate’s thesis advisor. Also, this standing committee will rotate every few years as appropriate. The completed proposal must be submitted to the Examination Committee members **at least two (2) weeks before the defense. Although the Qualifying Examination is expected to last two (2) hours, the candidate should be prepared to allot three (3) hours for the exam.**

At the Examination, the candidate will give a formal presentation of the proposal, which will be followed by a question-and-answer period during which time the candidate defends the validity of his/her proposal and answers questions related to the proposed area. Candidates should be prepared to answer questions related to Environmental Health Sciences and their course work, where it pertains to the subject. The oral presentation should last approximately 15 minutes with 30-45 minutes of question time to follow. Students can prepare extra slides that can be used to respond to questions that they might anticipate or that contain details that were not in the presented slides. These slides should be put in at the end, after the presentation.

All qualifying exam committees will also include at least one external faculty members per the recommendation of the candidate's advisor. External is defined as outside of this department. Ideally, the external member will have an expertise in the topic area of the exams. This is to ensure both diversity of committee members and a broader area of expertise represented within the field of EHS. Additionally, all members of the committee will receive a transcript of courses taken while in the DrPH program prior to the Qualifying Exam.

After the defense, the Committee will vote to: 1) pass the candidate to move forward onto thesis work, 2) ask for minor revisions to the proposals which will be addressed with the thesis advisor, or 3) not ready to move forward on thesis work, whereupon the candidate is required to undergo another exam within two months.

Dissertation/Thesis

After completing the qualifying exam (QE), the candidate's focus is to carry out their thesis project. One of the first steps is to choose a Thesis Committee in consultation with their advisor. **Candidates should meet with their Thesis Committee within two (2) months of completing the QE.** While working on the thesis topic, candidates should be guided by both their primary advisor and the Thesis Committee. Candidates must meet twice a year, at minimum, with all Thesis Committee members, although more frequent meetings are often appropriate.

Thesis projects should be hypothesis-driven and must comprise original research. Therefore candidates are obligated to perform studies that test their hypothesis, collect data and complete appropriate analysis of said data. The best measure of the candidate's work is whether the research is deemed worthy of publication in peer-reviewed journals. While publishing is not required, the candidate's goal should be to have at least one publication as the primary author.

Thesis and Dissertation (Defense) Committees

By definition, these are two separate committees; however, in reality, they can be, and often are identical for purposes of facilitating the dissertation process. **It is required that all Thesis Committees have at least 2 members that are from the department.** Thus, it is worthwhile to consider the guidelines for the composition of the Dissertation Committee when choosing the members of the Thesis Committee.

The Thesis Committee serves as a resource to the candidate during his or her thesis work. It meets regularly (no less than twice a year) to review the candidate's progress and make recommendations. With the assistance of the Academic Associate Director, **candidates must initiate the scheduling of these meetings.** The candidate must also complete a Thesis Committee Form (Appendix B) for each meeting, which requires approval from all Committee members and must be submitted to the Associate Director at the completion of the meeting. The Dissertation Defense Committee design is based on the requirements of Mailman School of Public Health (see *Dissertation Committee Formation* below). This committee's role is to oversee the actual defense of the thesis and then to vote on its acceptability as worthy of a DrPH degree.

Dissertation Committee Formation

To commence the Dissertation, the Director of Educational Affairs - with the advice of the doctoral candidate and advisor - will recommend appointment of a **five person Dissertation Committee**. **Three members must be senior faculty (Associate Professor or higher) from the Department while two members must be from outside the Department.** One senior faculty member, who is not the candidate's dissertation sponsor, is designated impartial chair of the ad hoc dissertation committee. One committee member (either internal or external) is designated as the Dissertation Reader. The Reader must review and approve the thesis before it can be sent out to the rest of the Committee members *and* before a defense date can be set. Any or all of the members can come from the Thesis Committee, but the makeup must include the advisor, two members from within the Department, and two from outside of the Department. For more information please see the OSA [School Handbook](#).

Dissertation Formatting

Information on formatting for the dissertation can be found in the Dissertation Guidelines in the [GSAS Dissertation handbook](#). Formatting guidelines for the DrPH dissertation are the same as those for the PhD. Additionally, bound hard copies from former EHS doctoral graduates are available for viewing in the EHS Classroom 1101. Please contact Alysa if you want to check any of them out.

Dissertation Proposal and Defense

The doctoral dissertation should rigorously examine or test a hypothesis or concept that can **significantly advance the field of public health**. Original data, either from a laboratory or epidemiologic study, is used as evidence supporting the thesis and the quality of writing must be thoroughly professional.

The dissertation proposal is comprised of four parts: (1) objectives of the proposed research, (2) methods to be used, (3) approximate schedule to be followed, and (4) a tentative outline, such as chapter headings, for the dissertation. Draft sections of the dissertation should be submitted to the Committee as soon as possible to resolve any potential conflicts at an early stage, and candidates are encouraged to maintain close communication with Committee members.

Distributing Dissertation Copies to Committee Members

Dissertation sponsors typically read and provide feedback on multiple drafts of dissertation chapters/papers. Other members of the Committee may read only “near-to-finished” drafts or multiple drafts of selected chapters. Students should speak with their sponsor regarding when to seek input from committee members. The degree of committee member involvement varies substantially, depending on the composition of the committee and research topic. Once the thesis is deemed ready by the sponsor, a designated “second reader” committee member should critically read the document and have his/her edits incorporated into the document.

Scheduling and Completing the Defense

Once all chapters and supporting documents have been completed and both *the sponsor and second reader* agree that the dissertation is ready to defend, the student distributes the thesis to all committee members. **No less than four weeks** should be allowed for committee members to read the manuscript. **The Associate Director should be notified when the dissertation is in its final states so that a time, date, and place of defense may be arranged.** The candidate is responsible for identifying a day and time that works for all dissertation defense committee members while the Academic Associate Director secures a room and advertises the seminar day and time. Remember that faculty maintain busy schedules and confirming a day and time

that works for all committee members can sometimes take a few weeks. Please anticipate such considerations when determining a realistic defense date/time frame.

The [Dissertation Defense Form](#) is provided electronically to the advisor prior to the defense and signed by the Dissertation Committee members. This form is submitted by the Academic Associate Director.

The Defense is comprised of two parts: 1) a one-hour public portion that is typically in seminar format and is advertised to all department members and, immediately following, 2) a closed-door portion typically lasting approximately two hours during which the Defense questions the candidate on his/her thesis or related areas of study.

The closed-door defense portion is attended by the student and his/her committee members and generally lasts about 2 hours. The chair of the committee often runs the defense, which begins with a short discussion (without the student present) to determine the general focus of the defense. Next, the student makes a brief presentation of the dissertation research and major findings. Following the presentation, committee members ask questions about the research and its implications. After the questioning is completed, the student is asked to leave the room while the committee deliberates. Committee members discuss whether the dissertation is adequate, what revisions are required, and whether the dissertation merits an award of distinction. It is the responsibility of the sponsor to communicate with the student about required revisions. Depending on the level of revision needed, the sponsor and/or additional members of the committee will review the revised portions and determine whether the revisions are acceptable.

Evaluation of Dissertation

The committee must decide on one of four possible assessments: Pass with Distinction, Pass, Incomplete, and Fail. The evaluation of the committee is recorded on a standard form and saved on a file in the department.

Pass

The dissertation is deemed acceptable subject to minor revisions. Supervised by his/her sponsor, the candidate corrects the dissertation in light of the committee's comments. Upon completion of the required revisions, the candidate is recommended for the degree. All revisions should be completed and the final dissertation deposited no later than six months from the date of the dissertation defense.

A unanimous vote or a vote with only one dissent in a lower grade constitutes a pass. In case of a split vote, the voting sheet and dissertation are submitted to the Director of Doctoral Studies and the office of Student Affairs for review and final decision.

Incomplete

The dissertation is deemed acceptable subject to major revisions. All revisions must be completed no sooner than three months and no later than one year from the date of the dissertation defense. Upon completion and acceptance of the required revision, the defense is considered successful.

Under this scenario, the committee chair shall delegate responsibility for the outcome of the revision to a subcommittee of from one to three members of the original committee. When completed, the major revisions must be submitted to each of the members of the revision subcommittee. If and when each member states in writing that the new text is satisfactory, letters are sent to the Dean's office to change the vote record from "Incomplete" to "Pass."

Fail

The dissertation is deemed unacceptable and the candidate is not recommended for the degree.

Distinction

The following guidelines concerning the question of the distinction should be followed in assessing the dissertation:

If the dissertation is deemed to have passed, the committee then votes on the question of distinction. The vote is by secret ballot and the decision to award “with distinction” on the degree must be unanimous. If an award of distinction is voted, a member of the examining committee other than the sponsor must prepare a letter to the Academic Dean outlining the qualities of the dissertation that merit the award of distinction. While there is no exact quota for the number of dissertations awarded with distinction, the standard of merit should be such that no more than ten percent of the dissertations receive such distinction. A student whose degree is awarded “with distinction” shall be annotated on the student’s permanent transcript and the commencement program. For more information please see the [OSA Student Handbook](#).

Depositing the Dissertation

Following successful defense, two bound copies of the final dissertation are to be deposited with Dean of Students at least one month before the awarding of the degree. The format of the document shall conform to guidelines set for the PhD by the Graduate School of Arts and Sciences: [Formatting Guidelines](#).

The DrPH candidate is responsible for completing the [graduation form](#) that must be submitted to the Office of Student Affairs. When the two bound copies of the accepted dissertation are submitted and approved by the Dissertation Committees Chair for transmittal to the libraries and the advisor, the doctoral training is traditionally considered complete and the title of Doctor of Public Health (Environmental Health Sciences) can be assumed.

Please make sure to familiarize yourself with the DrPH requirements and policies as stated on the Doctoral Degrees Section of the [Mailman Student Handbook](#).

Degrees are awarded in October, February, and May of each year. You are eligible to receive the degree on the next conferral date following completed deposit. Commencement for the three conferral dates of the academic year is held once each year in May. There are no conferral ceremonies held in October or February. Once a candidate has deposited, the candidate can be considered a DrPH.

Time Limit and Monitoring Student Progress on Dissertation Research

Candidates should expect the dissertation to take at least the equivalent of one year of full-time work. An overall time limit of seven (7) years for completion of degree requirements and the dissertation is set from the date of first registration following admission into the doctoral program. This limit applies to both full- and part-time students. Students may request a leave of absence from their department. Leaves of absence must be approved by both the department and Dean of Students. Periods during which the student is formally granted a leave of absence will not be counted in the seven year limit.

The student with support from his or her sponsor may request from the Director of Doctoral Studies and the Dean of Students an annual extension of the seven-year time limit. Such extensions will not automatically be granted, but will be looked upon favorably if the candidate can demonstrate that progress is being made towards completing the dissertation: [Time Limit and Monitoring Progress of Dissertation](#).

Time limit for Final Submission of Dissertation

As stated above, dissertations approved as pass (with only minor revisions required) must be deposited within six months of the defense date. Dissertations voted as incomplete (approved with major revisions required) must be deposited within one year of the defense date.

Important Additional Information about the Dissertation Process

Although students usually follow the sequence of steps listed above, there may be deviations when needed and as appropriate. Many of the rules about setting up a dissertation committee, defending a proposal, formatting the dissertation, and defending the final product are set by the Office of Students Affairs at Mailman in conjunction with the department. These are described in the [OSA Handbook](#) (see also related links on this site).

It is essential that both the candidate and sponsor read and follow OSA and Department guidelines. The sponsor is responsible for creating a dissertation committee, not the candidate, though he or she should be consulted. If you have questions, ask your advisor or the Associate Director; it's easier to fix a problem at the outset than at the end of the process.

Dissertation Binding Options

Harwitt Bindery
Walter N. Schnerb
121 Bennett Ave., Corner of 187th St.,
Basement 101
New York, NY 10033
212-923-4112.

Rustie's Bookbinding
Rustem ("Rustie") Gungor
323 E 75th St. bet 1st-2nd Ave
New York, NY 10021
212-717-7213
email: rbookbinding@aol.com
www.rustiesbookbinding.net

Dissertation Structure

Several formats are acceptable for a written thesis. There are some standards, however, that are expected, and the format below is a typical representation of the final dissertation. Those elements that are required by the department are indicated with an (R). There is no specific page requirement, but a typical DrPH thesis is usually 150-200 pages in length, including tables, figures and references.

One option is to follow the required guidelines, including an extensive Literature Review and then use publications (including submitted and accepted) as the middle chapters followed by a Conclusions and Future Directions Section.

(R) Title Page

This contains the thesis title, candidate's name and a statement submitted in partial fulfillment of the Doctoral of Philosophy degree.

(R) Abstract

This is usually a one- to three-page summary of the candidate's thesis work, where the question/hypothesis of the thesis is specified along with a brief outline of their data, results and conclusions.

(R) Table of Contents

This should state each chapter's title and delineate the subtopics in each. Figures should be listed here as well, preferably in a separate table.

(R) Acknowledgements

This is a brief statement (<1 page) where the candidate often acknowledges the contributions of his/her mentor, committee members, colleagues, other advisors, peers and family members who assisted in the candidate's ability to successfully conduct his/her research.

(R) Introduction/Literature Review*

This section is an exhaustive review of relevant literature that should build toward the formulation of a hypothesis. It usually begins with a broader perspective of the field of study and subsequently narrows its focus on those topics most relevant to the candidate's thesis work.

Methods*

A comprehensive Methods section is essential to a well-presented and cohesive thesis, particularly since the thesis is often used as a template for instruction by the project's successors. Methods can be included in individual chapters and need not be presented in a separate chapter, especially if the thesis has multiple chapters on different aspects of the research.

Results*

This section should contain multiple chapters. **Ideally, each chapter is a publication relative to the thesis for which the candidate is a first author. These can be papers that are already published, in press or submitted.** If the candidate was a secondary author, then there will need to be a separate write up that only includes the parts of the paper that represents the candidate's work. Unpublished work should also be included in the thesis as separate chapter(s), one for each topic. Even if papers make up the thesis, it must still contain separate chapters for an extensive literature review, overall conclusions and future directions.

Discussion*

In this section, the interpretation of the candidate's results is considered, along with an explanation of how these results can be incorporated into an increased understanding of the field.

(R) Conclusions/Future Directions

In this section, the candidate summarizes his/her findings and draws final conclusions. Future directions and related studies are also proposed.

(R) References

Full references with titles are specified in this section.

**This format can be used for each chapter if papers are published.*

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Financial Support

Currently we do not guarantee funding for our DrPH candidates. Full-time DrPH candidates may find support through their mentor once they begin their research project in year 2.

For all applicants, please pay careful attention to deadline dates, required documents (such as FAFSA and Columbia Aid Application) through the Financial Aid Website link attached below. It is also worthwhile to investigate major outside funding sources such as the links listed below.

- Mailman School Office of Financial Aid
<http://www.mailman.columbia.edu/students/financial-aid/funding-options>
- ExploreHEALTHCareers.org www.explorehealthcareers.org
- fastweb www.fastweb.com
- FinAid www.finaid.com
- GrantsNet <http://sciencecareers.sciencemag.org/funding>
- InternationalScholarships.com www.internationalscholarships.com
- AAUW www.aauw.org

Funding/Grant Writing Preparation

In order to best prepare candidates with grant writing, in addition to grant writing courses offered through Mailman School of Public Health, DrPH candidates are encouraged to explore appropriate external funding sources. Please see the link below as a starting point.

<http://www.brown.edu/about/administration/international-affairs/funding-opportunities>

Additional Funding Resources

Funding is available through the Office of Student Affairs for doctoral students who present at national and domestic conferences. The allowable amount is one reimbursement per year. Please see the website below for additional information on the amounts and application:

[Student Conference Funding](#)

Timeline

Detailed EHS DrPH Time Line¹

Approximate Time in Program	Action	Outcome
<i>Fall semester/Year One</i>	<i>Meet with Director of Educational Affairs to map out first semester</i>	<ul style="list-style-type: none"> • <i>Fall and tentative spring courses confirmed</i>
<i>Fall semester/Year One</i>	<i>Register for Journal Club and attend Seminar</i>	<ul style="list-style-type: none"> • <i>Attendance of Journal Club every semester until writing on dissertation begins</i>
<i>Spring semester/Year One</i>	<i>Meet with Director of Educational Affairs to confirm spring semester</i>	<ul style="list-style-type: none"> • <i>Spring courses confirmed</i>
<i>Spring semester/Year One</i>	<i>Meet with Director of Educational Affairs and/or Academic Associate Director to review an academic progress report at beginning of spring semester</i>	<ul style="list-style-type: none"> • <i>Bi-Annual Academic Progress Report is completed, accepted and kept on file.</i>
<i>End of Spring semester/Year One</i>	<i>Process of selecting a research topic and faculty advisor should begin towards the end of the first year in the program</i>	<ul style="list-style-type: none"> • <i>Researching topic areas and meeting with potential faculty advisors as appropriate.</i>
<i>Fall semester/Year Two</i>	<i>Meet with Director of Educational Affairs or new mentor early fall to complete bi-annual academic progress report</i>	<ul style="list-style-type: none"> • <i>Bi-Annual Academic Progress Report is completed, accepted and kept on file.</i>
<i>Fall semester/Year Two</i>	<i>Choose a mentor for thesis in preparation for qualifying exam</i>	<ul style="list-style-type: none"> • <i>Thesis advisor selected</i>
<i>Fall semester/Year Two</i>	<i>Select a thesis project topic</i>	<ul style="list-style-type: none"> • <i>Topic selected</i>
<i>Spring semester/Year Two</i>	<i>Actively working on qualifying exam²</i>	<ul style="list-style-type: none"> • <i>Qualifying exam may be taken as early as end of this semester but must be completed no later than end of the summer.*</i>
<i>Spring semester/year Two</i>	<i>Meet with Thesis Advisor and/or Director of Educational Affairs to review bi-annual academic progress report at start of spring semester</i>	<ul style="list-style-type: none"> • <i>Bi-Annual Academic Progress Report is completed by mid-Feb, accepted and kept on file.</i>

<i>Post year two</i>	<i>Within 2 months of completion of the qualifying exam set up a meeting with your thesis committee. This committee is made up in consultation with the sponsor.</i>	<ul style="list-style-type: none"> • <i>Established thesis committee.</i> • <i>This information is submitted via email to the Academic Associate Director</i> • <i>First meeting scheduled and completed.</i> • <i>Thesis Committee Form completed and submitted to Academic Associate Director</i>
<i>Post year two</i>	<i>Complete thesis work and meet with thesis committee every six months.</i>	<ul style="list-style-type: none"> • <i>Met with committee 2x in the calendar year</i> • <i>Submitted a Thesis Committee Form to Academic Associate Director</i>
<i>Post year two</i>	<i>Yearly seminar presentation followed up with a bi-annual Thesis Committee Meeting. This occurs up until dissertation defense.</i>	<ul style="list-style-type: none"> • <i>Met with committee 2x in the calendar year</i> • <i>Submitted a Thesis Committee Form to Academic Associate Director</i>
<i>End of year until program completed</i>	<i>Bi-Annual Academic Progress Report is reviewed with primary advisor</i>	<ul style="list-style-type: none"> • <i>Academic Progress Report is completed by mid-October and mid-February, accepted and kept on file.</i>
<i>Upon completion of thesis work</i>	<i>Finalize dissertation committee membership (see Dissertation Committee Formation section of this handbook)</i>	<ul style="list-style-type: none"> • <i>Thesis writing begins</i> • <i>Feedback received from thesis advisor</i> • <i>Identify a thesis reader who is a dissertation committee member who is on faculty at Columbia</i>
<i>Thesis writing completed</i>	<i>Schedule dissertation defense with the assistance of the Academic Associate Director</i>	<ul style="list-style-type: none"> • <i>Defend</i>
<i>Post Defense</i>	<i>Make corrections to thesis and deposit with OSA</i>	<ul style="list-style-type: none"> • <i>See OSA rules for dissertation deposit³</i>

¹ This time line was created as an outline for a full-time student. Part-time students will need to adjust this schedule as needed with the assistance of Dr. Freyer, Nina Kulacki and/or their primary advisor.

² The qualifying exam currently represents a standing committee of 4 EHS Faculty Members: Dr. Greg Freyer, Dr. Joseph Graziano, Dr. Matt Perzanowski and the candidate's thesis advisor. This committee may rotate every few years as appropriate. There is also an external member selected.

³ Upon completion of the qualifying exam you must register for DrPH Continuous Registration and/or Journal Club. Please see the Continuous Registration information in [this handbook](#) for more details on this information.

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Appendix A: DOCTORAL PROGRESS REPORT: (*This form must be completed by early fall and spring every year in the program*)

Columbia University, Graduate School of Arts and Sciences
Department of Environmental Health Sciences

BI-ANNUAL REPORT ON PROGRESS IN CANDIDACY IN THE DOCTORAL PROGRAM

To be submitted to

Nina Kulacki, 722 W. 168th Street, 11th Floor, Rm. 1112 (early fall and spring)

Name _____ CUID _____
(last) (first)

Semester completing this form: (Circle One) – FALL SPRING of Year _____

Department _____

Qualifying Exam Completed: YES NO

If no, anticipated date: _____

Lab Rotations completed (PhD students only. Include faculty members below)

1. _____

2. _____

3. _____

Current/anticipated members of the dissertation committee are (*5 in total – 3 internal to EHS, 2 external*)

1 (sponsor) _____

2) (chair) _____

3) (2nd reader) _____

4) 2 external members to the Dept _____

Is your thesis committee different than your above stated anticipated dissertation committee?

Yes No

If you responded yes to the above question, please explain the rationale for the difference in committee members:

Have you met with your thesis committee since your last bi-annual review? (Reminder – thesis committee meetings should take place twice a calendar year): Yes No
If you responded no to the above question, please explain the rationale:

First Date of Registration in DrPH program: _____

1. What progress have you made toward your degree during the past semester? (Do not include progress recorded in last semester's report.) Please explain departures from last semester/year's goals.

2. Itemize the remaining requirements for your DrPH. degree, particularly including your dissertation, and include your timetable for completing them. Indicate which one(s) you expect to complete during the next semester.

3. Please give the projected date for completion of your dissertation for defense:

4. What have you done this year to develop your teaching skills? (List courses taught independently or as a Teaching Fellow (TF), teaching workshops attended, etc.)

5. Please list any peer-reviewed publications you had this semester/year (including those in progress).

6. Please list any domestic or international conferences you attended this year and your role at the conference (i.e. did you present?). Please list any other presentation opportunities you have had since your last review.

7. List any external fellowships you applied for in this past academic semester. Indicate which ones were successful and provide the award amount.

Section II to be completed by the dissertation sponsor

1. Comments on student's progress on the dissertation during the last semester (if not at that point, then address progress on courses and research).

2. Comments on student's objectives for the next semester.

3. Is student's timetable for completing the qualifying exam and/or dissertation reasonable? Is the student's projected date of completion realistic?

4. I have met with the student to discuss his or her progress. Yes No

5. We have also discussed possible external funding sources. Yes No

Affirmed: _____
Signature of sponsor Date

Section III.

5. Student's reply to sponsor's comments.

Signed: _____
Signature of student Date

Appendix C: Dissertation Defense Form

This form may be found at:

<http://mailman-handbook.com/images/defence.pdf>