

## ENVIRONMENTAL HEALTH SCIENCES

## **PhD Student Handbook**

2022 – 2023 Academic Year

This handbook has been created to ensure EHS PhD students are familiar with Department and School procedures and protocol.

Important resources: EHS Department website Official MSPH handbook Official School handbook

Questions should be directed to Nina Kulacki, Director of Academic Programs, or Marianthi-Anna Kioumourtzoglou, Director, PhD Program, EHS

For a detailed academic calendar for 2022-23, please see the Mailman Academic Calendar

Academic Honesty & Honor Code: All PhD students/candidates\* are expected to adhere to the required standards for academic and scientific integrity, which can be found in the GSAS statement on Academic Honesty.

\*The term student refers to individuals who have NOT completed and passed their qualifying exams.

Once qualifying exams are successfully completed, the term Candidate is used.

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## PhD IN ENVIRONMENTAL HEALTH SCIENCES

Upon satisfactory completion of the PhD degree in Environmental Health Sciences, graduates will have achieved competencies enabling them to:

- Conceive, develop, and test hypotheses by conducting original research through scientific methodologies, leading to advances in basic and applied knowledge in environmental health sciences
- Communicate effectively, both written and orally, the results of research findings to their scientific peers, other professionals, and the public. Examples of how this is accomplished are:
  - o Compose research articles for submission to peer-reviewed, scientific journals
  - o Critically review and analyze professional literature and research findings
  - Report research findings at professional meetings
  - o Present research results yearly during departmental seminars
- Identify significant gaps in the current basic knowledge in environmental health sciences and develop approaches for filling those gaps
- Develop and utilize grantsmanship skills to write a cohesive research grant proposal in a standardized format, which incorporates a feasible and appropriate budget, to address significant environmental health studies issues
- Recognize how scientific findings in the environmental health sciences can influence policies and programs
- Communicate effectively with other graduate students and colleagues in an academic setting via the following methods:
  - Plan seminars and lab presentations
  - Demonstrate communication and teaching skills by effectively conveying complex information to students in a classroom setting. All PhD students are expected to provide teaching support as Teaching Fellows, for a total of 4 instances: one 3 credit class per academic year in Years 2 – 4 and one additional instance
    - Assist students facing challenges with the material
    - ♦ Grade papers and exams using graduate-level educational standards
    - Work with a faculty member to prepare the course and potentially develop a lecture that they present to the class

# PhD PROGRAM REQUIREMENTS AND PROCEDURES OVERVIEW OF PROGRAM

It is expected that PhD candidates will complete the program within 5 years.

Year 1	Students focus on coursework and carry out 2-3 rotations with eligible faculty. Candidates will identify a dissertation mentor no later than <b>July 31</b> <sup>st</sup> ( <i>before Year 2</i> ). They will then begin to develop a dissertation topic with their mentor.
Year 2	Coursework also continues during the second year. By <b>June</b> of Year 2, students complete their Qualifying Exam (QE) (see below for description of QE). Students are encouraged to submit the primary QE proposal for funding as an NIH F31 or an equivalent funding source.
Years 3 to 5	After a student successfully passes the QE, their focus is on completing their dissertation work. Details on all aspects of the program follow.

#### REGISTRATION POLICY

As per the guidelines provided by the Graduate School of Arts and Sciences (*GSAS*), all EHS PhD candidates must be continuously registered until all degree requirements are completed. Registration fees vary depending on the candidate's stage of training and other administrative details. Tuition is calculated on a flat-fee, not per-credit, basis.

Registration for a Residence Unit (RU) qualifies students as full-time and entitles them to take an unlimited number of courses during that semester.

<u>Candidates must complete six full RUs</u> to be eligible for a PhD degree. Those who enter the program with a master's degree are awarded 2 RUs of advanced standing (see below). Students without a master's degree must register for RUs in both semesters of Years 1, 2, and 3 of the program. While the RU is not itself a course, it is assigned a course ID number for registration purposes. RUs may <u>only</u> be earned during the Fall and Spring semesters, not during the summer. Please reach out to <u>Nina Kulacki</u> to address any questions about your registration status.

<u>GSAS requires a total of 60 credits</u> to be taken to complete the PhD degree. In addition to completing required and elective courses and RUs, students must complete the Qualifying Examination (QE) and the dissertation.

Once a candidate has fulfilled the RU requirements, they must maintain continuous registration in one of two ways: Extended Residency (*ER*) or Matriculation and Facilities (*M&F*), based on the following guidelines:

- Matriculation & Fees (M&F) registration: Candidates who have completed all 6 RUs and successfully completed the Qualifying Examination register for M&F. M&F entitles candidates to use University facilities, but not to take courses for credit or for audit.
  - Note if the student does not have a previous master's degree, they will work with Nina Kulacki to register for extended residency.

## Course Registration

PhD students typically focus on coursework in Years 1 and 2 in the program. All coursework taken is in direct relation to student needs and dissertation research. Based on this, the number of courses taken will vary. Before Orientation (*late summer*) the PhD students will meet with the director of the PhD program to identify courses and discuss the program plan and rotations.

Students should plan to register for an average of 15 credits per semester. To reach 15 credits, in addition to regular courses, students can enroll in *P9395 Doctoral Research*. The credit number for P9395 is variable to allow students to register for the number of credits needed. All registration takes place via SSOL, where students can log in and make changes as needed.

Candidates, i.e., those who have successfully completed their qualifying exams, are expected to have completed all coursework prior to their qualifying exams.

## **Cross-Registration Policies**

Students interested in cross-registration at another Columbia University Schools need the following permissions in order to register:

- First, they must obtain the approval of their faculty advisor, then contact the EHS
   Academic Program Director's signature to verify approval to apply the course to their
   degree program.
- **Second**, they must obtain permission from the School/Department that offers the course in order to secure a seat. 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/Department (*not the Mailman School*).

After obtaining the permissions, students must fill out this Cross Registration Application and send this information to Nina Kulacki to process.

#### Leave of Absence and Readmission details

Due to the continuous registration requirement, it is important for students to request a leave of absence in writing for any time that they will be away from the University for an extended period. Reasons may include ill health, maternity/paternity leave, military service, or other reasons deemed to be acceptable by the University.

<u>It is important to note</u> that if a candidate does not officially request a leave of absence and does not register for a semester, they must apply for readmission to the University before registration is allowed. To request a leave of absence, after obtaining permission from their advisor, students must send a letter of intent to the Director of Academic Programs – addressed to the Chair of the Department and Director of the PhD program for approval. For further details and information regarding leaves of absence and readmission, consult the GSAS Bulletin: Leave of Absence Request Form.

#### MASTER'S DEGREE PROCESSING

## Master of Arts (MA) degree

Upon the successful completion of two full-time semesters of course work or 2 RUs of credit, students are awarded a Master of Arts (*MA*) degree only <u>if they have not acquired any master's degree</u> <u>prior to program matriculation</u>. This involves completing a simple application through the GSAS.

## Master of Philosophy (MPhil)

The Master of Philosophy (*MPhil*) degree is awarded to all students following the successful completion of their qualifying examination and achievement of 6 Residence Units (RUs) or 6 semesters of coursework. This typically occurs in the summer of Year 2, for students who have a prior master's degree, or the summer of Year 3, for students who do not have a prior master's degree. In order to receive the MPhil, students must fill out the form found on the GSAS website.

#### STIPENDS and FUNDING

#### Fellowship Package:

PhD students in the Mailman School of Public Health receive a 5-year funding package that includes the following:

- Full tuition, as well as the Health Services and University Services and Support fees. If applicable, an International Service Charge will also be covered.
- An annual stipend of \$45,320 during the first academic year for up to 5 years, provided by the Department of Environmental Health Sciences via fellowships, research grants to their advisor, dissertation grants, training grants, and other sources.
- Students receive a 12-month student officer appointment that covers all coursework, teaching and research responsibilities, dissertation research, and professional development.
- The Columbia University Student Health Insurance premium for students and any eligible dependent(s) whom they wish to enroll in the university's student health plan.
- A 75% subsidy towards the Emblem Preferred Dental Plan premium for students and any eligible dependent(s).
- A \$5,000 annual childcare subsidy for each dependent child under the age of six and not yet attending kindergarten.

This annual support is for up to five years, by which time it is expected that students will successfully complete their course of study and dissertation. Renewal of this package each year is dependent upon the student maintaining good academic and administrative standing, which includes receiving acceptable grades in courses, maintaining a connection to a faculty mentor for their dissertation, making consistent and satisfactory progress in their dissertation research, passing any departmental examinations, and maintaining acceptable performance in teaching and research roles.

**Please note:** All stipends and salaries are subject to taxation and withholding; international students especially should review the information provided in their initial offer letter.

If a PhD student has questions about their source of funding, or payment schedule, they should ask their advisor, who will then contact the Department Administrator (*DA*) and CC Nina Kulacki.

#### ATTENDANCE AND VACATION

Students are expected to attend all classes, including journal club and weekly departmental seminars, and to participate actively. Scheduling conflicts that arise must be discussed with the student's advisor or the Director of the PhD program prior to having identified mentor. Since research and practice are fundamental parts of the curriculum, it is expected that students will work on their dissertation or rotation research throughout the program.

This is a twelve-month appointment, and all students are expected to continue working over the summer months. Students are allowed two weeks' vacation per academic year (*University holidays are approved time off and are not included in the two weeks' vacation*). Students must discuss plans for vacation or other absences with their advisor (*in Year 1, they will discuss with the Director of the PhD program*) and obtain prior approval via email.

#### **OUTSIDE WORK/EMPLOYMENT**

GSAS and the Department consider PhD training to be full-time effort. As such, the Program discourages students from taking on additional employment. Student appointments (*NIEHS T32*, *F31s*, *GRAs*, or other support administered through the university) are set at 20 hours per week and are considered full-time (as the educational component makes up the remaining effort). The School and University do allow students to take on additional assignments in the summer term (because of the reduced educational activity), but this cannot exceed 10 hours per week. However, additional work cannot interfere with one's progression toward the degree and is subject to a range of federal grant restrictions. Summer work paid through Columbia must be pre-approved by the Department, the Dean's Office, and Sponsored Projects Administration. External work outside the University is not governed by the University, School, or Program. It should be noted that NIH does not allow T32 or F31 appointees to work more than 10 hours a week on any external activity. To summarize, the only situation in which a student can receive additional compensation for additional effort from Columbia University is in the summer and only with pre-approval. Work outside Columbia is not governed by the University, School, or Program, but still must adhere to NIH rules, should not exceed 10 hours per week, and should not slow progression to degree.

Fellowships and other awards that do not require additional work are allowable.

#### PROGRAM TIME LIMITS

Students in the EHS PhD program are expected to complete the program within 5 years. Funding beyond Year 5 is reviewed on a case-by-case basis. This is consistent with the university policies, which can be found here.

#### SATISFACTORY ACADEMIC PROGRESS

Students are expected to obtain a grade of B or higher in every course for which they are registered. A student receiving a grade below a B, 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 PhD Committee and, if deemed appropriate, could be dismissed from the program.

#### **DOCTORAL WORK/LAB SPACE**

All incoming PhD students are assigned a workspace in their first year.

#### TEACHING FELLOW ROTATIONS REQUIREMENT

Teaching is considered an important component of doctoral training, and all students are required to engage in multiple teaching fellow opportunities during their graduate training.

<u>Each PhD candidate must complete four Teaching Fellow Rotations (TF) for a total of 4</u> <u>semesters during their program.</u> Students are required to rotate once per year in Years 2, 3 & 4 of the program. The fourth instance can be completed in any year. Typically, students are rotating in the first and final semesters of their program.

Teaching rotations will be assigned to PhD students at the beginning of each academic year. TF assignments are subject to availability and are assigned through the Director of Academic Programs.

The Department will make every attempt to match doctoral students with their choice of course for their TF, but first choices are not guaranteed. The expectation of the student participation and contribution during these TFs is that they will enhance their didactic training and gain experience in the classroom.

For those students who would like more instruction on teaching methods, there are several support systems at the Mailman School and the University that are designed to help prepare for students to teach. For support with teaching-related efforts, students are encouraged to take advantage of the robust training opportunities available at the Center for Teaching and Learning (CTL). The CTL provides seminars and workshops that can be a resource for practical advice about most aspects of teaching, which include:

- Course design
- Assessment
- Preparing a teaching philosophy
- Assembling a teaching portfolio
- Course management
- Innovative uses of teaching

#### SEMINAR and JOURNAL CLUB REQUIREMENT

All doctoral students are required to attend the weekly Departmental Seminar for all 5 years of the program. In addition, starting in Year 1, doctoral students are expected to present a 20-30 minute talk at the Departmental Seminar each academic year on the progress of their dissertation work. As the doctoral program increases in size, it is possible that there are not enough seminar sessions in the year to accommodate 40 min for all students. In that case, two students will share a seminar, with 30-min in total allocated to each one.

<u>All PhD students must attend Journal Club every semester</u>. Journal Club meets weekly and is an opportunity for doctoral students to read, critique and analyze primary research papers and engage in a critical review of the material. The goal of this course is to allow students to present and debate

informative, challenging, and current topics from scientific literature. The course instructor, which changes each semester, determines the format and topic.

#### RESEARCH ROTATIONS

The purpose of research rotations is for students to gain experience in a range of settings, and potentially identify a mentor and dissertation topic. Students who enter without a clear mentor carry out two or three semester-long research rotations. For students entering the program who have already identified a mentor and area of research, only two rotations are required. Rotations should be discussed with the Director of the PhD program. Rotations are carried out with a faculty member who has a primary or joint appointment in the Department of Environmental Health Sciences or is a mentor listed on one of the Departmental Training Grants. If deemed beneficial to the student's training, one rotation outside of the Department will be permitted with the approval of the Director of the PhD program. Primary mentors must hold a primary appointment in EHS.

Each rotation lasts approximately one semester, consisting of 12 weeks of work for 15+ hours per week. During this time, the student is expected to carry out research in collaboration with the faculty member. The purpose of this is to familiarize the student with the research interests of that particular investigator. Students should begin rotations in their first semester. The two or three rotations should be completed no later than the end of the first summer semester.

#### DISSERTATION RESEARCH

Upon completion of the last rotation, the student will have identified a dissertation advisor, at which time a dissertation project should begin to be formulated. <u>The dissertation project will become part of the Qualifying Examination (QE). The Qualifying Examination (described below) must be completed by July 1 of the second year of the program.</u>

#### PROGRESS MEETINGS

In addition to regular meetings with their advisor, students will meet with the PhD Faculty Director and Director of Academic programs once per academic year. These are scheduled by semester and all students will participate in these meetings – which are offered as additional support and communication opportunities for the student with program leadership.

#### PROGRAMS OF STUDY AND COURSES

Students in the EHS PhD program choose one of four concentrations, or "*tracks*," of study: Exposure Science and Environmental Epidemiology, Environmental Epigenetics and Molecular Mechanisms, Environmental Prevention and Mitigation, or Climate and Health. Brief descriptions of the four concentrations follow:

## Exposure Science and Environmental Epidemiology

Students in this track will be trained in and conduct research on exposure assessment for toxic substances and environmental epidemiology that includes a strong exposure analysis component as well as a solid background in epidemiology, data analysis, and statistical methods. Students will conduct work in exposure science (*methods, measurements, models*) as it relates to the complex inter-relationships between human populations, communities, ecosystems, and chemical, biological, and physical agents, and non-chemical stressors. Many students apply this skillset to epidemiologic studies. Students have carried out work on a range of environmental exposures (*air pollution, indoor* 

and outdoor biomass combustion, metals, phthalates, flame retardants, pesticides, radiation, etc.) and health effects (e.g. cardiovascular disease, respiratory effects, neurologic/neuropsychological effects, reproductive effects, and cancer), while being trained on robust methodology (e.g., biomarkers, ecologic investigations, experimental design, exposure/dose assessment, meta-analysis, risk assessment, and statistics). For instance, students have carried out studies on the role of pesticides in fetal development, the respiratory health effects of exposure to particulate matter, the potential contribution of phthalates to inner city asthma rates, and development of biomarkers for breast and liver cancer.

### Environmental Epigenetics and Molecular Mechanisms

This track is aimed at providing students with an understanding of how to conduct research in environmental epigenetics, molecular biology/biochemistry, and toxicology. Students will conduct work across multiple systems and diseases, including neurological, cardiovascular, and respiratory disease, cancer, prenatal and early life development, healthy and pathologic aging, and others. Epigenetics is an expanding area of research at Columbia with the presence in the program of several faculty members who are conducting cutting-edge work in this field. Not only will students on this track be exposed to cutting-edge concepts and methods in epigenetics and omics research, but also, the track includes other faculty members who conduct fundamental and molecular research on mechanisms of environmental disease (animal toxicology, molecular biology, biochemistry, etc.). Students in this track will carry out a dissertation project in the wet lab (epigenetics, molecular biology/biochemistry, toxicology), dry lab (computational biology and analysis of complex biological data), or—most commonly—a combination of the two.

## **Environmental Prevention and Mitigation**

Prevention and mitigation to offset potential adverse impacts of environmental exposures are the ultimate goal of all educational and research activities in the Department. Therefore, investigators and research projects in tracks #1 and #2 feed into the Environmental Prevention and Mitigation track methodologically, as well as practically. In fact, the EHS Department's intervention research has typically sprung off from observational and mechanistic studies that opened new avenues for interventions. Examples of training and research opportunities in this track include pollution prevention at gas stations with the objective to reduce benzene exposure from chronic hydrocarbon releases; cookstove intervention trials to investigate the impact of the reduction of exposure to biomass combustion; methyl donor supplementation to prevent the effects of air pollution exposure on DNA methylation; folic acid supplementation to facilitate arsenic methylation and elimination, and various mitigation and educational strategies to reduce arsenic exposure in the United States and Bangladesh, with implications for many affected communities in countries around the world.

#### Climate and Health

The climate and health track equips graduates with the knowledge and skills needed to advance society's capacity to understand, anticipate, and prevent adverse health consequences of climate variability and change. Climate-related health impacts can arise via complex interactions among environmental exposures and vulnerabilities, involving such factors as heat waves, air pollution, airborne allergens, ecological services, poverty, conflict, access to health services, water- or vector-borne diseases, water and food availability, migration and unplanned population displacement, and diverse impacts of extreme storm events, including effects on mental health.

## Concentration-Specific Courses for PhD Students:

Program coursework is completed in the first two years of the PhD program. (*Note:* If the student does not have a previous master's, they have the option to register for an additional discipline-specific course in year three of the program.) Examples of applicable coursework are available by contacting the Faculty Director to discuss. However, there is significant flexibility with coursework, depending largely on a student's research focus. It is recommended that students consult with PhD program leadership and faculty mentors in refining coursework.

In addition, all students in their second semester must register for and take the 1- credit course: G4010 Responsible Conduct of Research and Related Policy Issues.

## **QUALIFYING EXAMINATION (QE)**

PhD students are required to pass a written and oral Qualifying Exam (*QE*) by **July 1** of their second academic year.

#### Written Exam

Doctoral students must write two research proposals and defend them before the Qualifying Exam Committee. The first proposal is in the form of an NIH F31 pre-doctoral proposal and is focused on their specific dissertation topic. If students are applying to a different agency for a fellowship, these can also be acceptable, but depending on the format, may need to be modified for their qualifying exam. Students in this situation need to discuss this with the chair of the Qualifying Exam Committee. This proposal should effectively be a roadmap of their dissertation. The second proposal is on a topic separate from the dissertation topic and is written in the format of an R21 NIH grant application. It can be on a related subject but should be distinct from the primary proposal. **Most importantly, this should be a proposal conceived and written by the student.** 

Follow the timeline below for your proposals.

- <u>During fall of Year 2</u>, students meet with their advisor to develop their dissertation topic. In addition, by the end of the Fall semester, the topic of the second proposal topic should be decided upon. Students are free to seek out advice from faculty on this topic, but again it needs to be the work of the student. <u>During Fall of Year 2 or early Spring</u>, there will be a meeting of all students, their mentors, and members of the Qualifying Exam Committee, to review the QE process and to answer any questions.
- <u>By January 31<sup>st</sup></u>, a brief summary or abstract for each proposal needs to be submitted for approval to the Chair of the QE Committee.
- A student's Qualifying Exam Committee will consist of 3 standing committee faculty members (not including the advisor) and 1 additional examiner who is more familiar with the student's research. Advisors and students will identify this additional examiner, and the advisor will invite the external examiner to be a part of the committee. This additional person can be someone from within or outside of the EHS department. The advisor needs to let the chair of the qualifying exam committee know who the external examiner will be by January 31st.
- Since all second-year students are engaged in preparing their qualifying exams, it is recommended that they meet together on a regular basis to assist each other through peer review and feedback of proposals.

- By the end of February, the Qualifying Exam Committee will send second year students possible exam dates, which will be in late May or June.
- <u>By mid-March</u>, QE dates need to be picked by all students. Be certain that the
  outside person, chosen by the mentor and student, is available on the date of the
  exam.
- Written proposals need to be submitted to the Chair of QE Committee (currently it is Dr. Perzanowski) no less than 2 weeks before the exam date.

As student's Qualifying Exam committee is made up of 3 standing Qualifying Exam committee members plus one additional person who can provide expertise on your proposals (*see above*). Faculty mentors are present for the exam but are not active participants.

## **Format for Qualify Exam Proposals**

Taken largely from the NIH SF 424 Application Guide

## **Primary Proposal**

This follows the format of the Ruth L. Kirschstein NRSA Application. If you are submitting an application to a different funding agency, you should follow these same guidelines for submission to the QE Committee and then adapt it to your funding agency before submission.

Section	Subsections and Descriptions
Page Limits	Oubsections and Descriptions
Project Summary (abstract -1 paragraph not exceeding 30 lines)	A succinct and accurate description of the proposed work. Should be informative to other persons working in the same or related fields and understandable to a scientifically literate reader. Include the project's broad, long-term objectives and specific aims, and a description of the research design and methods.
Specific Aims (1 page)	State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved.  List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.  NOTE: A good specific aims section should allow a reader to have a clear understanding of what your grant is about. It is also where you need to "grab" the reviewer's attention.
Research Strategy (6 pages)	Organize the Research Strategy in the specified order and using the instructions provided below. Start each section with the appropriate section heading – Significance, Innovation, Approach.

### Research Strategy Cont. (6 pages)

#### (a) Significance

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

#### (b) Innovation

- Explain how the application challenges and seeks to shift current research or clinical practice paradigms.
- Describe any novel theoretical concepts, approaches or methodologies, instrumentation or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions.
- Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.

#### (c) Approach

- 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.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high-risk aspects of the proposed work.

If an applicant has multiple Specific Aims, then you should address Significance, Innovation and Approach for all of the Specific Aims collectively.

As applicable, should also include and preliminary studies, keeping within the three sections listed above: Significance, Innovation, and Approach. Discuss the preliminary studies, data, and or experience pertinent to this application.

#### Literature Cited:

All references need to be included.

THESE ARE OUTSIDE OF THE 6-PAGE LIMIT.

Citations should include authors, full titles, and journal references.

## Secondary proposal

This should follow this same format except that the Research Strategy is 6 pages.

Instructions for the F31 can be found here:

https://grants.nih.gov/grants/funding/ac) search results.htm?text curr=f31

The format is the R21. You can find this on the NIH web page, which can be found here, https://grants.nih.gov/grants/funding/r21.htm and here: https://grants.nih.gov/grants/how-to-apply-application-guide.html

#### Oral Exam

Once the time/date is confirmed, Nina Kulacki can assist the student with setting a location for the exam. 3 members of the standing QE Committee will be present for the exam plus an additional outside member, either from EHS or from another department, who is familiar with the topic(s) of the proposal(s). The dissertation mentor attends but does not participate in the exam, unless brought in to clarify an issue.

During the exam, the student will be asked to step out of the room for the first ~10 min so the QEC can discuss the proposals, followed by the two presentations (with a brief break in between), and finally the exam will close with the final deliberation of the committee and the report back to the student and advisor(s). The whole process should take approximately two and a half hours. Students should prepare two presentations, one for the F31 and one for the R21:

- <u>F31 presentation format:</u> The student will have 20 minutes to present, uninterrupted by examiners, followed by 40 minutes of questions and answers
- R21 presentation format: The student is limited to 20 slides (which should correspond to approximately 20 minutes of presentation). The committee can interrupt the student during the presentation. The total time for this presentation should be approximately 1 hour

Students can choose which proposal (*F31 vs R21*) they present first. The questions during the exam can be on details of the proposal or the validity of their proposal. Committee members can also ask questions outside of the actual proposal but related to the methodology or the broader topic area. Students should be prepared to answer questions related to Environmental Health Sciences and their coursework, where it pertains to the subject.

After the defense, the Committee will vote to:

- 1) **Pass with minor revisions**. There are invariably some revisions needed, especially on the primary proposal. These revisions could come from comments made on the written proposals or that arose during the oral presentation. The revisions are spelled out to the candidate and a deadline of generally 2-4 weeks are given to complete them. The committee does not need to see these revisions, but only have to be accepted by the advisor(s). The candidate submits the final proposals to Nina Kulacki and notifies Dr. Perzanowski, as the Chair of the Qualifying Exam Committee, that they have been completed. The candidate can then move forward onto dissertation work.
- 2) **Conditional Pass**, where the student is asked to make moderate revisions to the written proposals which will be completed within a specified time period, typically 4-8 weeks to the satisfaction of the QE Committee. In the case where the actual presentation was deemed unsatisfactory, the candidate would be asked to present again. Generally, this would focus only on the primary proposal. Upon completion of the addition work the student is issued a Pass.
- 3) **Fail**; indicates that the student is not ready to move forward on dissertation work. This would occur if the QE Committee identified major gaps in student's understanding of the materials that require significant rewrites to the proposal and/or full reexamination. The student would have four months to rewrite the proposals and then defend them again before the QE Committee. If the student does not successfully pass the second round of QE's, they will be asked to leave the program. Typically, upon successful completion of the Qualifying Examination, the candidate will be awarded a Master of Philosophy (see next page).

Within 1 week of the exam, the committee will provide written feedback on both proposals to the student, following the NIH review template. The committee will also provide the student with feedback on the presentations (also within one week), specifically assessing the following competencies:

- Clarity of presentation
- Construction of narrative
- Quality and appropriateness of visuals
- Ability to explain complex topics concisely & to a broad audience
- Demonstrate understanding of the literature
- Ability to be composed and answer challenging questions

All students will be asked to provide a 1-page response to the reviews within a month of the exam. In cases where the committee decides that a more detailed response is warranted, students may be asked to provide a longer document and/or also revise the text of the proposal(s). In those cases, the students will have more time to respond (6-8 weeks)

After successful completion of the Qualifying Exam, the candidate applies for the Master of Philosophy degree (*MPhil*) through the GSAS. In order to receive this degree, the candidate must have completed a total of six (6) RU's in addition to the Qualifying Exam. For students entering the program without a master's degree, another year of full-time status to accumulate the 6 RU's is required. The GSAS allows no more than 4 years to achieve the MPhil degree, otherwise the candidate is considered to be in poor academic standing.

#### SUGGESTED TIMELINE FOR QE PROPOSALS

This timeline was developed with help from doctoral students.

Month	Tasks
Fall Semester*	<ul> <li>Decide on the topics for both your dissertation (Qual 1) and second proposal (Qual 2)</li> <li>Begin to compile/skim important papers for literature review</li> </ul>
January	<ul> <li>Submit a brief description (abstract) of the 2 proposals to the Chair of the QE Committee for approval.</li> <li>Lit review, focusing on background information, what has been done, and on broad categories of methods that may be useful</li> <li>Begin an outline of your proposals – this will allow you to see what you know about already, and what you will need to look into more thoroughly</li> <li>This outline can be updated over time as you gain more info, if you're the kind of person who works well from outlines.</li> </ul>
February	<ul> <li>Choose an exam date, based on choices provide by the QE Committee.</li> <li>Continue lit review, looking into more specific methodologies. (For Qual 1, these might be things suggested by your advisor, given that this is your dissertation work. You may also already have more of a grasp on these, if your work during your first year was related to your dissertation project.)</li> <li>Complete an initial draft of your specific aims (Quals 1 and 2)</li> <li>Continue to flesh out your outlines for both Quals</li> </ul>
March	<ul> <li>Draft SIGNIFICANCE and INNOVATION for both Quals</li> <li>Alternatively, draft ALL of Qual 1</li> <li>Additional lit review as needed</li> <li>Note that these are initial drafts – not everything has to be set in stone yet</li> <li>Begin getting feedback from advisors and peers on your draft(s)</li> </ul>

April	<ul> <li>Draft APPROACH for both Quals</li> <li>Alternatively, draft ALL of Qual 2</li> <li>Additional lit review as needed</li> <li>Continue to receive feedback and revise both quals based on comments from advisors and peers</li> <li>By the end of April, you'll ideally have a full draft of both written Quals – again, it is okay if not everything is finalized, but you want to have something you can get feedback on</li> </ul>
Мау	<ul> <li>Begin thinking of questions you might be asked, and ensure you understand your rationale/methods well</li> <li>Begin working on presentations, aiming to have a draft of BOTH presentations by the end of the month</li> <li>Schedule your QE by mid-May</li> <li>Continue to revise your written quals based on advisor/peer feedback</li> <li>Submit your QEs to the Chair of the Committee at least 2 weeks before your exam date.</li> </ul>
June	<ul> <li>Begin giving practice presentations to other students, especially those of us who have been through this process before, and to lab groups – aim to practice each presentation at least twice</li> <li>Revise presentations based on feedback</li> <li>By the end of June: Take your qualifying exam!</li> </ul>

#### DISSERTATION PREPARATION AND PROCESS

## Formation and Composition of Dissertation Committee and subsequent Dissertation Defense Committee:

Within 2 months of successfully passing the QE, doctoral candidates, in consultation with their mentor, choose a Dissertation Committee and schedule the first Dissertation Committee meeting. It is the responsibility of the mentor to reach out to potential Committee members. The first Dissertation Committee meeting should occur within 6 months of completion of the QE. A Dissertation Committee is a critical component of the PhD educational process. The candidate MUST meet with their Dissertation Committee regularly (*twice a year, in October and April*). The Committee can monitor student progress, provide guidance to the student and to make sure that at the appropriate time the student is ready to defend their dissertation.

The Dissertation Committee requires a minimum of 3 members: the candidate's advisor and two additional members, one of whom should be from within the department. <u>Most Dissertation</u> <u>Committees are comprised of 5 members, with 3 members internal to the department and 2 external</u>. Occasionally, more than 5 members join the Dissertation Committee, generally to provide specific expertise. The Dissertation/Defense Committee can only be 5 individuals. <u>We suggest that the membership of the dissertation committee be the same as the Dissertation/Defense Committee</u>.

The Dissertation Committee members must complete a Dissertation Committee Form (Appendix B) for each meeting, which requires approval from all Committee members and must be submitted to the Director of Academic Programs at the completion of the meeting. This form is meant to provide a written document that:

• provides what is expected in the dissertation

- indicates student progress
- points out difficulties that the student may be having
- makes adjustments to the dissertation proposal if necessary
- sets goals for the next meeting and
- determines when the candidate is ready to write and defend their dissertation

Once the Dissertation Committee believes that the candidate is adequately prepared to write their dissertation, the candidate and advisor will identify a final Dissertation Defense Committee.

Note: Typically, adequate preparation for Final Dissertation Defense means that the committee agrees that the student has three publishable manuscripts.

#### Dissertation Defense Committee Formation

The Dissertation Defense Committee is usually, though not necessarily, the same as the Dissertation Committee, and needs to be made up of 3 faculty members from within the department and 2 additional members from outside the department. 1 faculty member, who has previously served as a member of a dissertation defense committee will serve as the Chair. This faculty member cannot be the candidate's dissertation sponsor (*mentor*). They are designated as an impartial chair of the Dissertation Defense Committee, a role that is only active during the actual dissertation defense. The Chair of the Committee must have served previously on a dissertation defense committee.

Additional information can be found in the GSAS Dissertation Handbook (the department policy may differ from the GSAS requirement, so please refer first to the information above).

#### PhD Dissertation

Dissertation projects must be original research. Therefore, candidates are obligated to perform studies that collect and/or generate 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. In the results section of the dissertation, ideally, each chapter is a publication relative to the dissertation for which the candidate is a first author. These can be papers that are already published, in press, or submitted (see the Written Dissertation Format Section of this handbook for more information).

#### Dissertation Format

The actual format of the written dissertation is somewhat flexible. It must have an "Abstract," an exhaustive "Literature Review" (*Introduction*), and a final Conclusions and Future Directions. As for the format of the body of the dissertation, chapters can be publications or manuscripts in preparation. If a candidate is using published manuscripts, they can include an entire paper where the candidate is first author. If the candidate only contributed to a paper, they can only include the part that was their contribution. Unpublished data/results can be included as a chapter(s) or as appendices. Some students elect to write a separate "Methods" Chapter, while others include specific methods in the appropriate chapter. Additional information on formatting for candidates' dissertations can be found in the "Guidelines" section of the GSAS Dissertation handbook.

## Preparing Paperwork for the Distribution, Defense, and Deposit of the Dissertation

When the sponsor agrees that the candidate is ready to defend their dissertation, the Intent to Distribute and Defend form must be submitted to the Director of Academic Programs.

It is important to note that this paperwork must be filed out before the dissertation has been distributed to all Committee members (*which takes place at least 4 weeks prior to the defense date*).

The following procedure follows paperwork submission:

- Distribution, Defense and Deposit in Ten Steps.
- The Director of Academic Programs then sends this form to the Dissertation Office in 107 Low Library.
- The Dissertation Officer confirms that the candidate has accumulated the required number of Residence Units (6 total), possesses an MPhil, is correctly registered as a defending candidate and has a Dissertation Committee that meets the GSAS guidelines on committee composition.
- After confirming the above, the Officer signs the form for submission to the Dean's Office.

## Distributing Dissertation Copies to Committee Members

Dissertation sponsors typically read and provide feedback on multiple drafts of dissertation chapters/papers prior to its circulation to the Dissertation Committee. When the dissertation is deemed complete, it is sent to the full Committee, who can suggest additional major and minor edits, as appropriate during the defense.

## Scheduling the Defense

Once all chapters and supporting documents are completed and the sponsor agrees that the dissertation is ready to be defended, the candidate distributes the dissertation to all Dissertation Defense Committee members. Committee members are allowed a minimum of 4 weeks to read the dissertation. The candidate is responsible for identifying a date/time that is feasible for their sponsor and the Committee, so the Director can assist with securing a room and advertising the seminar. Since faculty maintain busy schedules, confirming a date/time can take a few weeks. Candidates should anticipate such considerations when determining a realistic defense date/timeframe and contact the Committee as early as possible for scheduling.

#### The Defense

The Defense is comprised of 2 parts:

- A public, 1-hour session that is typically in seminar format and advertised school-wide and
- 2) A closed-door examination session immediately following the public presentation, with the candidate's Dissertation Committee and sponsor present.

The closed-door defense portion generally lasts about two to three hours. The Chair of the Committee presides over the defense, which begins with a short discussion (*in the absence of the candidate*) to determine its general focus.

Committee members pose questions to the candidate regarding their dissertation and related areas of study. This can follow many formats, but generally, the Chair asks the outside members to ask questions first followed by the 2 inside members. The mentor does not ask questions, as their role is to provide clarification on questions that may arise. After everyone has asked their questions, there is an opportunity to go around one more time. After questioning is completed, the candidate is asked to leave the room while the Committee members discuss whether the dissertation is adequate or not, and what revisions might be required. It is the responsibility of the committee chair to communicate with the candidate about required revisions. Depending on the level of revision needed (*minor or major*), the mentor and/or additional members of the Committee will review the revised portions and determine whether the revisions are acceptable.

## The Committee may vote as follows:

- Pass with minor revisions: The candidate must complete minor revisions and deposit 2 final copies of the dissertation in the Dissertation Office no later than 6 months from the date of the defense. Provided that the sponsor approves the revisions, the candidate is permitted to receive their degree.
- Pass with major revisions: The candidate may submit acceptable revisions within a period of time that is acceptable to the dissertation committee. This may mean a major rewrite of the presented dissertation and possibly the need for additional study. If deemed appropriate, the Committee can request a subsequent meeting with the candidate once the required changes are made. The Committee Chair informs the candidate that failure to make the necessary revisions within the specified time frame will result in a rejection of the dissertation
- Fail: This vote indicates that the dissertation cannot be made acceptable, even with major revisions and that the candidate is not recommended for the PhD degree. Here, the candidate may petition within 10 years of the award of the MPhil degree to the Dean of the GSAS, with a body of published, independent, original and scholarly material. If deemed acceptable, the candidate will be permitted to schedule another examination.

**NOTE:** GSAS is in the process of changing these categories, but this has not been finalized. Once that decision has been made, the Handbook will be modified.

## Depositing the Dissertation

Once the candidate has successfully passed the dissertation defense and completed any required follow up revisions, the only remaining academic requirement is the final dissertation deposit. The dissertation deposit, not the defense, is the final requirement for the PhD degree, and the regulations governing the dissertation deposit are uniform in order to facilitate cataloging and to ensure that the work is accessible to other scholars—an integral part of the requirements for the doctoral degree.

**Note:** It is the candidate's responsibility to ensure that all aspects of the dissertation (*i.e.*, *text*, *tables*, *etc.*) comply with the required GSAS format; otherwise, the Dissertation Office will ask that the candidate amend the dissertation before accepting the final deposit. For detailed instructions, please refer to the "Dissertation Rules: Defense, Format and Deposit" section of the Dissertation Office Handbook.

Candidates are expected to consult with the Dissertation Office about any special problems encountered while preparing the final document. The deposit-related material received at the defense includes a listing of the materials that are to be brought to the final deposit at the Dissertation Office in 107 Low Library. The dissertation must be deposited no later than 6 months after their defense. Complete information regarding the deposit is available through the Deposit Gateway. Students should also review the FAQ about the electronic deposit system. For questions about the deposit process, please contact **Esmeralda McCormick** at es183@columbia.edu.

## **Degree Conferral**

Degrees are awarded in October, February, and May of each academic year. Candidates are eligible to receive their degree on the next conferral date following a completed dissertation deposit. Commencement for the three conferral dates is held once each year, in May, with no conferral ceremonies held in either October or February. Once the candidate has deposited their dissertation, they are considered to be a PhD recipient.

#### Written Dissertation Format

There are 2 common formats used for the written dissertation in the Department of Environmental Health Sciences. The traditional format reads as one cohesive book, with introduction, methods, extensive results, discussion, conclusions and future directions. The alternative "separate papers" format retains the introduction and conclusions/future directions sections, but sandwiches those sections around 3 or more stand-alone manuscripts that are formatted for publication. The format outlined below is a typical representation of the traditional dissertation. Those elements that are required by the department are indicated with an (*R*). There is no specific page requirement, but a typical PhD dissertation is usually 150-200 pages in length, double-spaced, 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:

Title Page	This contains the dissertation title, candidate's name and a statement submitted in partial fulfillment of the Doctoral of Philosophy degree.
Abstract	This is usually a 1 to 3 - page summary of the candidate's dissertation work, where the question/hypothesis of the dissertation is specified along with a brief outline of their data, results, and conclusions.
Table of Contents	This should state each chapter's title and delineate the subtopics in each. Figures should be listed here as well, in a separate table.
Acknowledgements	This is a brief statement (<1 page) where the candidate often acknowledges the contributions of their mentor, committee members, colleagues, other advisors, peers, and family members who assisted in the candidate's ability to successfully conduct their research.
Introduction/Literature Review*	This section is a comprehensive 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 dissertation work.

Methods*	A comprehensive Methods section is essential to a well-presented and cohesive dissertation, particularly since the dissertation 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 dissertation has multiple chapters on different aspects of the research
Results*	In a traditional dissertation, this section will contain multiple chapters. In a "separate paper" dissertation, each chapter is a paper formatted for publication for which the candidate is a first author. Ideally, at least one of these papers should be submitted for publication prior to submitting the dissertation. If the candidate is using published manuscripts, they can include an entire paper where the candidate is first author. If the candidate only contributed to a paper, they can only include the part that was their contribution. Unpublished work can be included in the dissertation as a separate chapter(s) or in appendices. Even if papers make up the dissertation, it must still contain separate sections for the 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.
Conclusions/Future Directions	In this section, the candidate summarizes their findings and draws final conclusions. Future directions and related studies are also proposed.
References	Full references with titles are specified in this section.

<sup>\*</sup> This format can be used for each chapter if the dissertation consists of separate papers

## Important Additional Information about the Dissertation Process

The policies about establishing a Dissertation Committee, defending a proposal, formatting one's dissertation and defending the final manuscript are set by the GSAS and are described in the Dissertation Office Handbook: **Dissertation Policies and Procedures**.

Candidates should also see related links on this site, for it is essential that both the candidate and sponsor read and follow the GSAS guidelines. Students can request a meeting with Nina Kulacki to discuss any concerns or questions about process and timelines in order to address any issues before they impede upon current or future academic achievement.

#### Dissertation Deposit Requirements:

**Electronic Deposit Gateway** 

#### Dissertation Office Forms:

**Dissertation Office Forms** 

#### GSAS Calendars:

**Dates and Deadlines** 

### **Dissertation Binding Options:**

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

Or

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

## **Detailed EHS PhD Program Timeline**

Approximate Time in Program	Action	Outcome
Late Summer & Fall Semester/ Year 1	Meet with Director of the PhD program and Director of Academic Programs to coordinate first semester	<ul> <li>Fall and tentative Spring courses confirmed</li> <li>Options for possible rotation research</li> </ul>
Toal I	Identify mentor for first rotation	First rotation begins in the Fall semester     Research rotation summary is completed and sent to Director of Academic Programs
	Register for Journal Club and attend Seminar Series. Attend all other applicable classes.	Completion of Journal Club every semester until the final semester of the program.
Spring Semester/ Year 1	Meet with Director of the PhD program and Director of Academic Programs to confirm spring semester.	Spring courses confirmed     Advanced Standing Application submitted for students who have a prior graduate degree
	Responsible Conduct of Research (mandatory for all students)	Course completed

Spring Semester/ Year 1 Cont.	Begin second rotation.  Note: students are required to complete up to (3) three rotations	<ul> <li>2<sup>nd</sup> rotation begins in the Spring semester.</li> <li>Research rotation summary is completed and sent to Administrative Director of Academic Programs</li> <li>Research rotation presentations occurs</li> </ul>
	MA for students without Master's degree	Candidate entering program without master's degree is awarded the MA through the GSAS
Summer/ Year 1	Rotations continue through the summer as appropriate	Progress toward completing rotation
Fall Semester/ Year 2	Complete 3 <sup>rd</sup> and final rotation, if applicable. Meet with Director of the PhD program and Director of Academic Programs to review academic progress report for start of year two unless an advisor has already been selected.	<ul> <li>All three research rotations completed (all students complete up to 3 rotations). Final research rotation summary submitted to Director of Academic Programs</li> <li>Research rotation presentation occurs at the end of the semester</li> <li>Choose an advisor by July 1 and identify a dissertation topic.</li> </ul>
A Teaching	Fellow position commence	es in either the Fall or Spring of Year 2
Spring Semester/ Year 2	Select a dissertation project topic  Actively working on Qualifying Exam Work on funding proposal Additional coursework as appropriate	<ul> <li>Qualifying Exam may be taken as early as end of this semester but must be completed no later than July in the summer before Year 3.</li> <li>Final courses have been taken</li> </ul>
	Meet with Director of the PhD program and Director of Academic Programs and provide an academic progress report mid-way through year two.	Academic Progress Report is completed by mid-February, accepted and kept on file

Once Qualifying Exam is completed and a total of 6 RUs have been obtained, the MPhil degree is granted. ( <i>If previous master's.</i> )		
Post-Year 2	Soon after qualifying exam, meet with primary advisor to choose Dissertation Committee and schedule meeting with Committee	<ul> <li>Established Dissertation Committee</li> <li>This information is submitted via email to the Director (ninakulacki@columbia.edu)</li> <li>First meeting scheduled and completed</li> <li>Dissertation Committee Form completed and submitted to Director of Academic Programs</li> </ul>
		ion
	Yearly Teaching Fellow pyear in the program	oosition once every academic year until final
Upon completion of dissertation work	Finalize Dissertation Committee membership (see Dissertation Committee Formation section of this Handbook)	Dissertation writing begins     Feedback received from dissertation advisor
Dissertation -writing completed	Schedule dissertation defense with the assistance of the Director	Defend
Post-Defense	Make corrections to dissertation and deposit with the GSAS	See GSAS rules for dissertation deposit <sup>1</sup>

<sup>1</sup>http://gsas.columbia.edu/content/deposit-gateway

## **FORMS**

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

# REPORT ON PROGRESS IN CANDIDACY IN THE DOCTORAL PROGRAM To be submitted to

Nina Kulacki, 722 W. 168<sup>th</sup> Street, 11<sup>th</sup> Floor, Rm. 1112

Name:(Last, First)	UNI /CUID:
(Last, First)	
Date form completed:	
Qualifying Exam Completed: YES N	10
Date completed or anticipated date: _	
Lab Rotations completed (PhD studen	nts only). Include faculty members here:
<u> </u>	
-	
Current/anticipated members of the Di (5 in total – 3 internal to EHS, 2 extern	
1) (Sponsor)	
2) (Chair)	
3) (Internal EHS)	
4) (Outside EHS)	
5) (Outside EHS)	
Is your Dissertation Committee differe Yes No	nt than the above stated anticipated Dissertation Committee?
If you responded yes to the above que committee members here:	estion, please explain the rationale for the difference in

Have you met with your Dissertation Committee since your last bi-annual review? (Reminder – Dissertation Committee meetings should take place twice a calendar year): Yes No
If you responded no to the above question, please explain the rationale here:
Matriculation date:
Date MA received:
Date MPhil received:
<ol> <li>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.</li> </ol>
<ol> <li>Itemize the remaining requirements for your PhD or DrPH degree, including milestones like the Qualifying Exam and Dissertation Defense with a timetable for completing these items. Indicate which items you expect to complete in the next semester.</li> </ol>
3. Projected date for dissertation defense:
<ol> <li>What have you done this year to develop your teaching skills?         List courses taught independently or as a TA, teaching workshops attended, etc.     </li> </ol>
<ol> <li>Please list any peer-reviewed publications you had this semester/year (including those in progress).</li> </ol>
<ol> <li>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.</li> </ol>

	List any external fellowships you applied for in this past academic semester. Indicate which ones were successful and provide the award amount.
Section	n II to be completed by the dissertation sponsor
	Comments on student's progress on the dissertation during the last semester ( <i>if student is not</i> yet at that point, then address progress on courses and research).
2.	List student's objectives for the next semester.
	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
Sponso	or Signature Date
Sectio	n III
5. Stud	lent's reply to sponsor's comments.
Studen	t Signature Date



## **ENVIRONMENTAL HEALTH SCIENCES**

## **Dissertation Committee Form**

Student Information	
Student Name:	
Advisor (Primary):	
Co-Advisor (if applicable):	
Matriculation Date:	
Committee Members:	re & confirm approval of form via email after meeting.)
Print names in this column	Email confirmation date for each in this column
Meeting details: (Please use a	s much space as needed to include specific details.)
Meeting details: ( <i>Please use a</i> Meeting Date:	s much space as needed to include specific details.)
	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from previous meetings met?	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from previous meetings met?  If changes/other	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from previous meetings met?  If changes/other details, list here.  List specific goals	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from previous meetings met?  If changes/other details, list here.	s much space as needed to include specific details.)
Meeting Date:  Anticipated Defense Date:  Were goals from previous meetings met?  If changes/other details, list here.  List specific goals	s much space as needed to include specific details.)

Next meeting planned for date or estimated date here: (Meetings should be held in Oct and Apr unless committee specifies earlier meeting here)	
Advisor Signature:	Date:
Co-Advisor signature ( <i>if applicable</i> ):	Date:
Student Signature:	Date: