

Doctor of Philosophy Environmental Health

Program Guidebook 2023-2024

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BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH

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http://www.bu.edu/sph/academics/departments/environmental-health/

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Nikki Longe, nlonge@bu.edu
BUSPH Registrar 617-358-3434

Welcome to the Department of Environmental Health!

We have developed this guide to help you navigate the requirements of the PhD program in Environmental Health (EH) and familiarize you with the opportunities and resources available to our students. In addition to this guide, you should also consult: (1) the <u>BUSPH website</u> and <u>Bulletin</u> to stay informed about departmental and school-wide policies and procedures; (2) the **EH DEPOT**, a centralized resource to help all members of the EH department with administrative processes in the department; and (3) the **PhD Student Onboarding Guide**, a resource for incoming EH PhD students.

As a student in our PhD program, you will have shared office space on the 4th or 5th floor of the Talbot Building. This allows our students to sit in close proximity to each other and to the faculty members in the department, just one aspect of the collegial atmosphere in which faculty members are readily available to assist students.

We do not expect our entering doctoral students to know exactly what project they would like to serve as the basis for their dissertation research. Accordingly, our research rotation program is designed to assist students in the process of identifying a dissertation topic, providing an opportunity to not only gain experience on different projects but also in working with different faculty members. Some general topic areas for ongoing research in the department are listed on our website.

You should have received your advisor assignment and have hopefully had the opportunity to meet and discuss your plan for your first semester. During your first two years, your advisor will help you select courses, help to select and arrange research rotations, and work with you to develop and refine your plans for a dissertation topic. Your current advisor was assigned based on your mutual research interests, but it is not uncommon for students to change advisors as dissertation plans develop.

As director of the PhD program, I am one of your primary resources during your time in our program. For the 2023-24 academic year, <u>Professor Kevin Lane</u> will assume responsibilities as Interim Program Director while I am on sabbatical; he will therefore be one of your primary resources during the 2023-24 academic year.

I am pleased that you have decided to join the graduate student community in the Department of Environmental Health at BUSPH and I look forward to working with you in the coming years!

Sincerely,

Birgit Claus Henn, MPH, ScD Doctoral Program Director

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Department of Environmental Health

Boston University Policy Statement

Boston University and the Boston University School of Public Health reserve the right to change the policies, curricula, or any other matter in this handbook without prior notice. Students will be notified of major changes as soon as practicable after they are decided.

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QUICK REFERENCE GUIDE

- o <u>SPH Bulletin</u>: http://www.bu.edu/academics/bulletin/
- o The **EH DEPOT** and **EH PhD Student Onboarding Guide** will be made available to students upon starting the program. (Contact the Academic Programs Administrator for questions on access.)

Subject	Office & Contact Info
Course Materials	Online: Course information, assignments, and syllabi are typically posted on the
	course webpage on Blackboard Learn.
	Course Readers and textbooks are available for purchase through
	Barnes & Noble bookstore located at 660 Beacon Street, Kenmore Square,
	Boston University Charles River Campus.
Career Services:	Career Center: http://www.bu.edu/sph/careers/
Career advising, resume	Talbot 2 East
reviews, alumni networking,	The Career & Practicum Team:
job postings, career fair,	https://www.bu.edu/sph/careers/career-practicum-office/career-practicum-
employer info sessions	team/
Financial Assistance	Office of Student Financial Services: https://www.bumc.bu.edu/osfs/applying-
T manetal Assistance	for-aid/sph-2/
	Financing Your Education: http://www.bu.edu/sph/admissions/financing-your-
	education/
Housing	Housing Resources: https://www.bu.edu/sph/students/getting-started-at-
	<u>busph/student-housing/</u>
Library Resources:	Alumni Medical Library: http://medlib.bu.edu/
paper and online books and	L Building, 12 th Floor
journals; reserve materials;	617-358-4902
computer labs; research guides	Doctor University Library Network baths //www.by.ody/library/
Daulding and Turn on autobion	Boston University Library Network: http://www.bu.edu/library/
Parking and Transportation:	Office of Parking and Transportation Services:
Including information on	http://www.bumc.bu.edu/parking/
student T and bus passes	710 Albany Street
	617-638-4915
	https://www.bu.edu/sph/students/student-services/student-resources/campus-
<u> </u>	resources/transportation/
Registration:	Registrar's Office: https://www.bu.edu/sph/students/advising-and-
Graduation Applications;	registration/courses-and-academic-resources/
Course Rotation Guide;	Talbot 1 West
Academic Policies; Transcripts	Nikki Longe, <u>nlonge@bu.edu</u> , 617-358-3222
	Degree students register online at http://www.bu.edu/studentlink
	Unofficial transcripts available at http://www.bu.edu/studentlink
	Official transcripts available at http://www.bu.edu/reg/
Registration Directions	How to register on the StudentLink:
	https://www.bu.edu/sph/files/2019/03/Course-Planning-and-Registration-
	Guide 031219.pdf
Student Health and	Student Health Services: http://www.bu.edu/shs/
Behavioral Medicine	881 Commonwealth Avenue
	617-353-3575
	Behavioral Medicine: https://www.bu.edu/shs/behavioral-medicine/services-
	we-provide/
	881 Commonwealth Avenue

	617-353-3569
	SARP (Sexual Assault Response & Prevention Center
	930 Commonwealth Ave
	617-353-SARP
	SPH Health & Wellness: https://www.bu.edu/sph/students/student-
	services/health-resources/
	Robyn Volcy-Lee
	SPH Wellness and Communications Manager
	sphwell@bu.edu
Student Services:	Office of Student Services: http://www.bu.edu/sph/students/
Student organizations;	Talbot 2 Center
Academic accommodations;	Mary Murphy-Phillips, mcmurph@bu.edu, 617-358-1750
Events	
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IMPORTANT DATES THROUGHOUT THE ACADEMIC YEAR

Boston University School of Public Health (BUSPH), like other schools & programs on the Medical Campus, maintains its own academic calendar. It is important that students always refer to the BUSPH registration packets, academic calendar, and websites for SPH-specific information. That said, SPH endeavors to align its schedule with the Charles River Campus schedule while still allowing for 14 class meetings for our four-credit courses.

Academic Calendar and Course Schedules

Visit the <u>Registrar's Office website</u> to learn more about important dates on the academic calendar such as holidays and exam dates (https://www.bu.edu/sph/students/advising-and-registration/). Also available on this page are course schedules, registration information, and more.

School of Public Health Policy on Religious and Government Holidays

The School, in scheduling classes on religious or government holidays, intends that students observing these holidays be given ample opportunity to make up work. Faculty members who wish to observe such holidays will arrange for another faculty member to meet with their classes or for cancelled classes to be rescheduled.

Emergency Notifications

In the event of an emergency or class cancellation, notices will be posted to the <u>BUSPH student web site</u> (http://www.bu.edu/sph/students/). Email messages will also be sent to faculty, staff and students in the event of closings. Students will be notified by the instructor of make-up dates for any cancelled classes.

The <u>BU Alert notification system</u> communicates with the campus community upon the confirmation of a significant emergency or dangerous situation involving an immediate threat to the health or safety of students or employees occurring on the campus. For more information about BU Alert, visit <u>BU Emergency Management</u> (https://www.bu.edu/em/). Students may add or update their BU Alert contact information by visiting the Student Link.

PLEASE NOTE: The Boston University Medical Campus has different closing policies from the Charles River Campus. <u>Do not</u> rely on information about the Charles River Campus or Boston University. Obtain information specific to SPH from the above resources.

The Environmental Health PhD Program

OVERVIEW

The Doctor of Philosophy (PhD) in Environmental Health program provides students with specialized training and research experience in fields such as environmental epidemiology, exposure science, spatial epidemiology/GIS, risk assessment, and toxicology. Interested doctoral students can also participate in the Graduate Program in Urban Biogeoscience and Environmental Health (URBAN), a traineeship that focuses on tackling urban environmental challenges through interdisciplinary training, workshops, and internships. For more details on requirements specific to URBAN, please see the URBAN website (https://sites.bu.edu/urban/). Our PhD program is one of a small number of academic units nationally that specializes in investigating exposure-related health outcomes in community settings. The program provides knowledge, experience, and training in core disciplines to allow for critical thinking in research design, interpretation, and translation. Graduates of our doctoral program continue the department's tradition of rigorous, innovative, and socially engaged research as postdoctoral research fellows and faculty members at academic research institutions, as senior scientists at environmental consulting companies and other private industries, and as senior scientists at government and regulatory health agencies, as examples.

To receive the doctoral degree, candidates entering the doctoral program must complete the equivalent of 64 credits (16 graduate-level courses), complete three research rotations, pass a qualifying exam, and complete a dissertation. Candidates who have already earned a related master's degree must take 32 credits (8 graduate-level courses) beyond the master's degree. The research rotations begin upon entering the program and provide students the opportunity to develop research skills and clarify their research interests. URBAN internships can qualify as research rotation experiences. To prepare for their qualifying exam and to engage in dissertation research, students design a set of courses with their advisor, in addition to the courses that are required as part of the common curriculum (see Section 2: Course Requirements).

This guide describes each of the major elements and requirements of the PhD program, the role of faculty advisors in helping students navigate requirements and make decisions, and the administrative requirements of the program. The program requirements described here apply to all students entering the program in Fall 2023 or later. Students who entered the program before that time are encouraged to follow the structure described here to the extent feasible, but have the option of adhering to the prior doctoral program guidelines, and should consult with their advisor and/or program director about how best to proceed.

COMPETENCIES

Upon completing the PhD in environmental health, students will be able to:

• Communicate the basic characteristics of major chemical, physical and biological hazards and the properties that govern the hazards' behavior in the environment;

- Explain the scientific characteristics (e.g., route of exposure, dose response, mode of action) of major chemical, physical, and biological hazards that result in human health risk;
- Explain and analyze genetic, physiologic, and social factors that affect the susceptibility to adverse health outcomes following exposure to environmental hazards;
- Critically evaluate and interpret the hypothesis, experimental design, methods and results
 presented in a paper from a technical journal article in an environmental health discipline
 (toxicology, epidemiology, exposure assessment, environmental policy);
- Identify data gaps and formulate testable hypotheses about critical questions in environmental health (epidemiology, toxicology, exposure assessment, environmental policy);
- Design and implement data collection strategies and rigorous evaluations to test hypotheses using novel or current techniques;
- Analyze and interpret environmental health data;
- Identify appropriate intervention strategies for specific environmental health problems;
- Prepare scientific manuscripts for publication in peer reviewed journals in the field of environmental health; and
- Communicate scientific results at national and/or international conferences in the field of environmental health.

ADVISING

Boston University offers its students an enormous array of intellectual opportunities and resources on both the Medical and Charles River Campuses. In addition to fulfilling the academic requirements, it is up to the student to make choices that best enhance their career preparation. To assist with these decisions, students will be assigned a faculty advisor upon accepting the School's offer of admission. The student advisor is available to discuss coursework, research rotations, career paths, and other issues relevant to student success; however, while the advisor can help the student make the most of their investment, it is ultimately the student's responsibility to meet administrative and academic requirements and deadlines.

In the EH PhD program, we recognize two distinct advising roles: the pre-dissertation advisor and the dissertation advisor. These two roles can be filled by the same faculty member or different faculty members, depending on which arrangement best serves the student's needs. These advisors are responsible to advise the student on all aspects of progress through the doctoral program.

The pre-dissertation advisor is assigned to each accepted applicant by the EH Doctoral Committee based on common research interests to ensure that formal advising is in place upon acceptance to the program. The pre-dissertation advisor meets with the student regularly (i.e., on a weekly or bi-weekly basis), helping to select courses, arrange research rotations, and refine research interests.

The pre-dissertation advisor often continues as the dissertation advisor, though it is also acceptable for students to change advisors when research interests become more clearly defined and the student would be best served by such a change (contingent on available funding for student either through faculty research grants, individual F31 fellowships, or other). The program director is available to assist students with any questions or concerns about changing advisors. If students wish to formally change their advisor, they must inform the EH Academic Program Administrator in writing, so that the necessary changes can be made to their official student record. This change should generally occur before taking the qualifying exam or by the end of the 4th semester in the program, whichever occurs first. Each student's dissertation advisor also serves as the chair of their dissertation committee. The dissertation advisor meets weekly with the student, providing scientific training and helping the student manage progress through the program.

In addition to the pre-dissertation and dissertation advisor(s), students are encouraged to consider other EH faculty as additional informal mentors, as well as staff (such as the Academic Program Administrator), and other students. At BUSPH, we support an integrated advising model that includes peer advisors, staff advisors, and faculty advisors/mentors working together to support students.

If you have questions, concerns, or comments about the overall academic curriculum and policies or about the advising process, contact Christine Copacino, the Academic Program Administrator at copacino@bu.edu or 617-358-2660; Kevin Lane, Interim Doctoral Program Director (2023-24 academic year), at klane@bu.edu or 617-358-2631; or Birgit Claus Henn, Doctoral Program Director, at bclaus@bu.edu or 617-358-2459 (on sabbatical for 2023-24 academic year).

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Course Requirements

Students begin coursework immediately upon entering the program. A student entering the program without prior graduate training must complete a minimum of 64 credits in graduate-level courses, as detailed below. A student entering the program with a related master's degree must complete a minimum of 32 credits in graduate-level courses. However, all students must still meet the specific course requirements as part of the common curriculum and training area requirements of the program, and complete all relevant coursework, as detailed below.

Students are required to achieve a minimum grade of B in all courses.

The following pages provide a summary of the curriculum, which comprises three categories of courses: (1) the common curriculum, (2) training area requirements, and (3) electives. In addition, at the start of the PhD program, all students must complete PH700, Foundations of Public Health, an online course designed to provide students with foundational knowledge in public health.

The **common curriculum** consists of six courses that are required of all PhD students in the EH program. Together these courses provide students with a foundation in the science and methods of environmental health, including the translation of science into policy. Students who have previously taken statistics are encouraged to take one of two statistical computing courses (BS723 Introduction to Statistical Computing or BS730 Introduction to R) without first taking BS704 Introduction to Biostatistics. If a student does take BS704, this course will be counted as an elective in the PhD program.

The **training area requirements** consist of required courses in specific areas chosen by the student for specialized training. One major training area and two minor training areas should be identified by the student, in consultation with their advisor, based on the main areas of their proposed dissertation research. Major training areas include environmental epidemiology, exposure assessment, or toxicology. Minor training areas include any of the major training areas as well as additional focused options. A student may design a training area and set of requirements if the student's desired area of study is not otherwise achievable. In such cases, the student should consult with their advisor in developing the individualized training area, which must be approved in writing by the EH Doctoral Committee. The three selected training areas (one major, two minors) serve as the basis for the student's qualifying exam (see more below and see Section 4: Qualifying Exam).

Finally, each student works with their advisor to identify **electives** to complete at least the minimum required credits. Occasionally the nature of the student's research interests requires coursework beyond the minimum credits. Courses required in training areas other than the student's selected training areas may also be chosen as electives.

By taking four courses each fall and spring semester, most full-time students complete coursework within two academic years. However, in addition to these specific course requirements, the student is required to complete all courses determined to be relevant to the student's research interests. This requirement

to complete all relevant coursework will sometimes mean that the student takes more than the minimum number of required credits.

During the summer semesters, doctoral students are expected to work on research rotations and/or dissertation-related activities.

Doctoral students must complete a **Course Approval** form (see Appendix C: Student Forms) and return to the EH Academic Program Administrator before registering for courses every semester and whenever they add/drop a course after initially registering.

COURSEWORK FOR THE PHD PROGRAM IN ENVIRONMENTAL HEALTH

Require	d Courses for the COMMON CURRICULUM:	Credits	Semesters
EH710	Physiological Mechanisms of Health and Disease	4	Fall
EH730	Methods in Environmental Health Science	4	Fall, Spring
EH768	Toxicology for Environmental Health and Epidemiology	4	Spring
EH805	Environmental Health Science, Policy and Law	4	Alt. Spring, even yrs
EP714	Introduction to Epidemiology	4	Fall
BS723 OR	Introduction to Statistical Computing	4	Fall, Spring, Summer
BS730	Introduction to R: Software for Statistical Computing	4	Fall, Spring, Summer

When planning for qualifying exams, each student identifies one major and two minors. Major training areas are: Environmental Epidemiology, Exposure Science, and Toxicology. Minor areas can be either of the other two major training areas or any of the following: Biostatistics, Community Based Research, Environmental Infectious Diseases, Environmental Health Policy, Urban Ecology and Climate Change, and Risk Assessment Methods. A student should plan to take at least four courses beyond the required common curriculum courses to satisfy the major, and two courses beyond the required common curriculum to satisfy each minor. Students and advisors work together to select appropriate courses in each of the training areas.

Required	Courses for MAJOR TRAINING AREAS:	Credits	Semester
Environm	ental Epidemiology		
EH757	Environmental Epidemiology	4	Spring
EP813	Intermediate Epidemiology	4	Spring
EP854	Advanced Epidemiology	4	Fall
BS852	Statistical Methods in Epidemiology	4	Fall/Spring
Exposure	Science		
EH804	Field Methods in Exposure Science	4	Fall
EH811	Intro GIS for Public Health	4	Fall
EH872	Environmental Data and Exposure Modeling	4	Alt. Spring, odd yrs
BS805*	Intermediate Statistical Computing & Applied Regression Analysis	4	Fall/Spring/Summer

Toxicolog	У		
EH713	Essentials of Genetic Technologies and the Future of Public Health	4	Spring
EH866	Risk Assessment Methods	4	Fall
BS805*	Intermediate Statistical Computing & Applied Regression Analysis	4	Fall/Spring/Summer
or			
BS830	Design and Analysis of Microarray Sequencing and Next Generation Sequencing	4	Fall/Spring
GMS MM730	Biological Core Technologies (or similar course)	3	Fall

Courses to consider for requirements in the minor training areas are included in the tables above and below. These courses can also be considered as additional electives. In all cases, coursework should be tailored to meet the student's specific needs in the context of a minor training area. Additionally, if a student wishes to be examined in a major or minor training area other than those listed above, they can work with their advisor to develop a plan, as described above. Directed study/research (EH961/962) can also be considered; no more than 8 credits can be in the form of directed study/research.

Suggested	Courses for MINOR TRAINING AREAS or ELECTIVES	Credits	Semester
EH720	Climate Change and Public Health	4	Fall
EH722	Climate Change and Health Equity	4	Spring
EH727	Incorporating Health to Design Healthy Climate Solutions	4	Spring
EH735	Environmental Determinants of Infectious Diseases	2	Spring
EH745	Wastewater and Health/Sustainable Sanitation	2	Fall
EH750	Water Quality and Public Health	2	Fall
EH799	Urban Biogeoscience and Environmental Health Colloquium	2	Fall
EH851	Advanced GIS for Public Health and Climate Research	4	Spring
PH801	Community-Engaged Research: Theory, Methods, and Applications	4	Fall
PH825	Analysis of Emerging Infections Using the One Health Approach	4	Fall
PH885	Grant Writing for Doctoral Students	2/2	Fall 2/Spring 1
SB818	Qualitative Research Methods	4	Fall/Spring
BS750	Essentials of Quantitative Data Management	2	Spring
BS825	Advanced Methods in Infectious Disease Epidemiology	2	Fall
BS845	Data Science and Statistical Modeling in R	4	Fall/Spring
BS853	Generalized Linear Models with Applications	4	Spring
BS857	Analysis of Correlated Data	4	Spring
EP857	Design and Conduct of Cohort Studies	2	Fall
EP858	Design and Conduct of Case-Control Studies	2	Fall

EP861	Quantitative Bias Analysis Methods for Epidemiologic Research	2	Alt. Spring, odd yrs
GMS BN798	Functional Neuroanatomy in Neuropsychology	4	Fall
GMS PH748	Endocrinology	4	Var.
GRS MA751	Statistical Machine Learning	4	Spring

^{*}BS845 (R-based) may be taken in place of BS805 (SAS-based)

Students who completed PH717 (Quantitative Methods) during their MPH program at BUSPH may enroll in either EP770 or EP714 to satisfy the epidemiology requirement (EP714) in the Common Curriculum of the PhD program.

COURSE WAIVERS AND TRANSFER CREDIT

Some students enter their degree program having completed previous coursework that might help them meet degree requirements. Students with prior graduate-level course experience may be eligible to transfer up to 8 credits toward their degree. For a previously completed course to be accepted for transfer credit, it must be a graduate-level course in which the student has received a grade of B or better and which has not been applied to meet the requirements of another degree program either at Boston University or elsewhere. The previously completed course must be relevant to the PhD program as determined by the program director, who must approve all transfer credits. The judgment of the EH Doctoral Committee in this regard will be final. The course may not reduce credits taken at BUSPH for the doctoral degree below 32 credits. If transferring credits, students must fill out the Transfer Credit/Waiver-Request form.

In meeting the course requirements described in the prior section, the following specific restrictions apply:

- Courses counted previously towards a completed degree cannot be transferred for credit in the
 doctoral program, but may waive some requirements with the approval of the program director.
 If waiving courses, students must fill out the Transfer Credit/Waiver Request form, after
 consulting with their advisor and program director. Syllabi of prior courses must be submitted
 for review and, in most cases, the program director will consult with the instructor of the
 specific BU course to determine whether the course can be waived.
- If taken prior to entering the doctoral program, a specific course listed above will count towards the doctoral degree (as a waived requirement) if the course was taken at Boston University not more than five years before entering the doctoral program.

The BUSPH transfer credit and course waiver policy is available at: https://www.bu.edu/academics/sph/policies/transfer-credit-and-course-waiver/.

DOCTORAL CONTINUING STUDY STATUS

Students who have completed all required coursework **must** complete the <u>Doctoral Continuing Study Status form</u>, signed by the program director, and submit to the Registrar when coursework is complete. With submission of this form, students will be registered for continuing study until they graduate. Students who have completed this form in a prior term do <u>not</u> need to submit a new form unless their status will change for the new term. Students must be registered for Continuing Study to retain student health insurance.

^{**}GMS and GRS courses require pre-approval from program director and course instructor

Research Rotations and Training Activities

RESEARCH ROTATIONS

Students are encouraged to become involved in research early in the program, while still taking courses. However, we do not expect our entering doctoral students to know exactly what project they would like to serve as the basis for their dissertation research. Accordingly, our research rotation program is designed to assist students in the process of identifying a dissertation topic, providing an opportunity to not only gain experience on different projects but also in working with different faculty members.

Specifically, during their first two calendar years of study, students are required to participate in three research rotations with faculty members. Students work with their advisor to select rotations based on their research interests. A research rotation has three components:

- At the beginning of each rotation, the project leader provides the student with background reading material, such as copies of proposals and relevant papers.
- Students engage in research activities and participate in meetings of the research group, which
 typically occur weekly or biweekly. At these meetings, the details of projects are discussed,
 including progress, problems, and new directions or interpretations.
- The student and project leader work together at the start of the rotation to identify a final
 product, deliverable, or goal to be achieved by the end of the rotation. At the end of the rotation,
 student and project leader review the final product/deliverable/goal and discuss the student's
 experience.

Before the start of each research rotation, the student must complete a **Research Rotation Proposal** form (see Appendix C: Student Forms and EH DEPOT), obtain the necessary signatures, and return the form to the EH Academic Programs Administrator. In some situations, research rotations are allowed to serve as the basis of a directed research course for which the student receives course credit; the student's advisor and the rotation mentor must approve such an arrangement. Most research rotations are expected to be completed with a member of the EH faculty as rotation mentor. However, in certain situations, it may be appropriate for a student to work with a mentor from outside the EH department or outside of BU. URBAN internships can qualify as research rotation experiences. If students wish to complete a research rotation outside of BU, they must present a proposal for the rotation demonstrating how this would contribute directly to progress toward the dissertation. This proposal must be reviewed and approved in advance by the advisor and program director.

For an overview of EH research examples, please visit http://www.bu.edu/sph/about/departments/environmental-health/research/.

RESEARCH TRAINING PROGRAMS

Each doctoral student is required to complete two Boston University training programs: (1) training in the <u>protection of human research subjects</u> (CITI course); and (2) training in the <u>responsible conduct of research (RCR)</u>, which consists of three online modules plus a 10-week, in-person course. These training

programs should be completed as early as possible, preferably during the first year of study, and must be completed within the first two years of study. Each doctoral student must also register for an ORCID number and share this with the program director and Academic Program Administrator.

TEACHING ASSISTANTSHIPS

Serving as a paid teaching assistant (TA) is considered part of the doctoral student experience. Each doctoral student is required to work as a paid TA for at least one semester in a course at BUSPH, but may be asked to TA more than once. All doctoral students are expected to engage in teaching, with priority given to TAing in EH department courses; teaching experiences are considered a part of doctoral training. Income from serving as a TA is in addition to the regular stipend received by PhD students.

At the time of the annual progress report (June/July), students are asked to indicate their preferences for courses to TA in the upcoming year. Students will be matched with their preferred courses as best as possible, depending on need for TAs in the given year.

DOCTORAL SEMINAR

All doctoral students are required to participate in the doctoral seminar, a weekly departmental seminar held during the fall and spring semesters, throughout their time in the program. This seminar series provides an opportunity for students to hear from experts in various environmental health topics, share ideas and research initiatives with fellow doctoral students and faculty, and gain experience in making presentations to their professional peers.

Doctoral students in the third year of the program help to identify themes for seminar in that given year, as well as to invite seminar speakers. This is an opportunity for students to develop leadership skills and to network with experts in an area of environmental health that is of high interest to them.

Each doctoral student is required to give at least one presentation each year, either in the doctoral seminar or at another department-wide event, until they have completed the program. In preparing any seminar presentation, the doctoral student will work closely with their advisor in a structured process that includes at least one required practice presentation.

Doctoral students should not formally register for the seminar.

PROSEMINAR

In proseminar, doctoral students meet approximately monthly during the fall and spring semesters to receive additional training in aspects of research that are often under-addressed as components of their coursework (e.g., grant writing, strategies for preparing a manuscript, strategies for managing data, etc.). The first session of each semester is typically an update from the Department Chair, who provides an overview of the latest activities/developments in the department and in the school as a whole, and the Doctoral Program Director, who reviews expectations of doctoral students as well as logistics of funding for the stipend and research. Subsequent sessions then alternate between a topic session and lunch with a guest speaker, following the speaker's presentation in doctoral seminar. The topic sessions are identified by 3rd year students, with oversight and input from the Doctoral Program Director. The final session of each semester is used as a student review session, in which doctoral students provide feedback to the Doctoral Program Director and/or Department Chair to be used as a basis for program enhancements. Attendance at the first and last proseminar sessions of the year is required, and attendance at other proseminar sessions is expected.

JOURNAL CLUB

To enhance the training experience, doctoral students are expected to participate in journal club. Students meet approximately monthly to review and discuss a selected journal article. The topic sessions/articles are identified by the 4th year students. Journal club allows students to gain experience reviewing and critiquing scientific journal articles, stay abreast of the literature in the field, and become more familiar with diverse topics across the field of environmental health.

MENTORING OF YOUNGER LEARNERS

The Department of Environmental Health supports initiatives to expose younger learners to environmental health, particularly minority and underrepresented individuals who may have fewer opportunities to hear about environmental health. To enhance the experience of training younger learners and to promote diversity in the field, doctoral students are strongly encouraged to participate in at least one mentoring experience while in the program. We will provide a list of opportunities. The nature of this experience, including timing and duration, should be discussed with advisors in advance.

Qualifying Exam

To be eligible to defend their dissertation, students must pass the qualifying exam, which covers specified areas of study and consists of a written and an oral component.

MAJOR AND MINOR FIELDS OF STUDY

The qualifying exam evaluates the student's knowledge of core areas of environmental health, with particular emphasis on **one major and two minor fields.** These are areas in which the student has substantial preparation in the form of coursework and which are relevant to the student's likely dissertation topic. A student should plan to take at least four courses beyond the introductory level in the major field and two courses beyond the introductory level in each minor field.

The exam also evaluates the student's ability to synthesize information, organize thoughts, put those thoughts down on paper in a coherent fashion, think on their feet, and clearly communicate in the form of an oral presentation. Finally, preparation for the exam encourages synthetic, critical learning.

Working with their advisor, a student may choose major and minor fields from the list in Section 2 or define one or more areas of study tailored to their interests. The student must provide a written proposal for such a custom area of study, which must be approved by the EH Doctoral Committee (see Section 2: Course Requirements). The written proposal should include the name of the custom area, a brief paragraph describing the area of study and how it relates to the proposed research, and at least two potential graduate-level courses at BU that provide training beyond the introductory level in that area.

APPLICATION TO TAKE QUALIFYING EXAM

After completing all required coursework, each student must submit an application to the Doctoral Committee for approval to take qualifying exams no later than the end of their fifth semester (i.e., fall semester of the third year in the program), and at least 2.5 months before they would like to take their qualifying exam. The application includes: (1) the Request to Complete Qualifying Exam form (see Appendix C: Student Forms and EH DEPOT); (2) a summary of all completed course work in the form of an unofficial transcript that is annotated with which courses are being used for major and minor fields; (3) a research proposal, which is prepared by the student in collaboration with their faculty advisor in a format analogous to an application for a Public Health Service grant (see section below, RESEARCH PROPOSAL); and (4) a list of anticipated advisors that will work with the student to conduct the proposed research. Students should communicate with the program director to coordinate timing of application submission for review by the EH Doctoral Committee, which meets monthly. If the application is approved by the EH Doctoral Committee, then the student is allowed to schedule the exam; otherwise, the Committee communicates with the student's advisor regarding the additional steps required.

RESEARCH PROPOSAL

The student is required to write a research proposal for their planned research. The research proposal serves important purposes: it obliges the student to clarify the conceptual basis of their work and state the research question(s) being addressed; it forces detailed planning of the work itself; it gives the student

experience in the professional skill of proposal writing; and it serves as an agreement between the student and their committee about the research work to be done. Requiring that a research proposal be completed prior to qualifying exams ensures that the trainee has a plan for proceeding with research and provides the faculty examiners with information about that plan so that the written and oral exams can be designed accordingly.

Broadly, the research proposal must include a clear statement of the goal(s) of the research project, descriptions of the study design and analyses to be performed, and a brief presentation of how the project will contribute to a scientific understanding of the problem. Specifically, each research proposal should be no more than 13 pages in length and must include an abstract; the specific aims of the planned work including the research question(s) and hypotheses being addressed ('Specific Aims'); a section on the background and significance of the planned work ('Significance'); a description of how the planned work is innovative ('Innovation'); and a detailed description of the study design, data collection (if applicable), and data analysis ('Approach').

A draft of the proposal is prepared in collaboration with the advisor prior to taking the qualifying exam. However, since a student does not form a dissertation committee until after passing the qualifying exam, the final components of the dissertation are ultimately determined by the dissertation committee in combination with the student.

To support students with the process of research proposal writing, BUSPH offers a grant writing course (PH885) open to all PhD students who are ready to launch into writing a proposal for their dissertation research. The course runs in the Fall2 and Spring1 semesters and is organized into two parts: Fall2 is a didactic portion focused on best practices in grant writing, and Spring1 is focused on writing, critiquing, and refining original grant proposals to support dissertation research. Most students have produced a federal predoctoral grant application for submission (e.g., F31, R36), though they could also prepare a foundation grant.

QUALIFYING EXAM COMPONENTS

The members of the qualifying exam committee are selected by the EH Doctoral Committee and program director. The qualifying exam committee includes three faculty members with expertise in the major and minor fields.

Written component:

Each student is assigned six published journal articles chosen by the examination committee: two papers in each of three topic areas. Students have one month to review the papers and related research. During the subsequent written examination, students are required to answer two of three analytic essay questions in each research training area based on the assigned papers. The exam is closed notes, with only the assigned papers (and any notes written on them) allowed into the exam. The written examination is administered by the Doctoral Program Director and/or Academic Program Administrator and is limited to 6 hours. Exceptions to the 6-hour time limit or other procedures will be made only for documented disabilities, and any such accommodations will follow the school-wide procedures already in place to conform to the Americans with Disabilities Act. Please contact Director of Student Services, Mary Murphy-Phillips at mcmurph@bu.edu or at 617-358-1750 for more information.

Committee members grade written examinations and make one of three determinations: pass, conditional pass, or fail. The Doctoral Program Director communicates the results to the trainee within 3 days. In the event of a pass, the trainee is allowed to proceed with the oral exam, which takes place exactly

one week after the written exam. In the event of a conditional pass, the exam committee makes a recommendation to the EH Doctoral Committee that specifies additional remedial activities to be completed by the student before proceeding to the oral exam. In the event of a fail, the committee will suggest remedial activities and the student will work with their academic advisor to construct a written plan for proceeding. Students who fail the written component of the qualifying exam will be given one opportunity to retake that component of the exam.

Oral component:

At the start of the oral exam, students give an oral presentation (maximum 20 minutes) of their draft research proposal. The examination committee asks questions related to the three chosen topic areas, topics raised in the papers assigned for the written examination, and/or topics relevant to the proposed dissertation research. The oral exam lasts as long as committee members feel is necessary for rigorous evaluation of the student's knowledge, typically a maximum of 2 hours.

At the end of the oral examination, the committee immediately confers to evaluate the student's performance and recommends a pass, a conditional pass, or a fail. In the event of a pass, the student is allowed to form a dissertation committee and proceed with full-time dissertation research. In the event of a conditional pass, the exam committee makes a recommendation to the EH Doctoral Committee that specifies additional remedial activities to be completed by the student, at which time the student would be awarded a pass. In the event of a fail, the committee will suggest remedial activities and the student will work with their academic advisor to construct a written plan for proceeding. Students who fail the oral component of the qualifying exam will be given one opportunity to retake that component of the exam.

Dissertation

The student may begin working with faculty members on research at any time after starting the program.

DISSERTATION ADVISOR AND COMMITTEE

Upon passing qualifying exams, the student works with their dissertation advisor to form a dissertation committee. The committee should consist of at least three faculty members, including the dissertation advisor who serves as committee chair. Additionally, at least one member must have a primary appointment in the Department of Environmental Health.

The doctoral student must submit a **Request to Form Dissertation Committee** form (see Appendix C: Student Forms and EH DEPOT) to the Doctoral Program Director naming the topic of the proposed research and listing the proposed dissertation committee, with a brief description of each proposed committee member. The Director will circulate the form to the EH Doctoral Committee; if the EH Doctoral Committee raises concerns about the composition of the dissertation committee, the student will be asked to meet with the Committee to consider those concerns.

The dissertation advisor meets weekly with the student, providing scientific training and helping the student manage their progress through the program. The student is expected to meet with the full dissertation committee at least once a semester. Committee members mentor the student in carrying out the research and writing papers, and help the student manage the timing of their progress through the program.

The student is required to form their dissertation committee no later than 6 months after passing the qualifying exam.

DISSERTATION CONTENT AND FORMAT

The dissertation includes an abstract, an introduction (Chapter 1), three publishable papers (Chapters 2-4), and a conclusion (Chapter 5). All doctoral dissertations must be formatted according to the guidelines described in the "Research Guide for Writers of Theses and Dissertations," which is available at: http://library.bu.edu/theses. All text should be Times New Roman, 12 pt, and double-spaced.

The abstract should contain a clear and brief statement of the problem, the procedure(s) and/or method(s) followed, the results, and the conclusions. The abstract should be prepared carefully, as it will be published in ProQuest's *Digital Dissertations/Dissertation Abstracts International*. The abstract is limited to 350 words.

The introduction (Chapter 1, approximately 8-10 pages) should provide the background and significance of the research, summarize the relevant literature, and identify the gaps so that the reader appreciates the need for the new research. The introduction should provide a broader context than the background included in each of the three papers. The introduction should conclude with a brief overview of the three papers.

Chapters 2-4 take the form of three papers meeting current standards of publication in peer-reviewed journals (e.g., *Environmental Health Perspectives, Environmental Science & Technology, Journal of Exposure Science & Environmental Epidemiology, etc.*). The papers must be original work by the student; a review article does not meet this standard. Further, at least two of the three papers that make up a dissertation must be closely related, forming a body of work.

The student must be first author on at least two of the papers. It is acceptable for the student to be second author on one paper if, in the opinion of the dissertation committee, the student has made a substantial intellectual contribution to both the research and the writing of the paper.

The conclusion (Chapter 5, approximately 8-10 pages) should summarize and integrate the findings of the three papers, describe the key limitations of the research, describe the public health implications of the findings, and indicate next steps for related research. The conclusion should do more than simply restate the findings of each paper, and instead should integrate the three papers conceptually, and place the research in an environmental health framework.

OUTSIDE READER

The dissertation committee selects an outside reader for the student's dissertation review and defense. The outside reader cannot be an author on any of the papers that make up the student's dissertation and is generally from outside the Boston University School of Public Health; however, an outside reader from within the Boston University School of Public Health may be allowed if approved by the EH Doctoral Committee.

The outside reader does not participate in the research itself, but rather reviews and comments on the dissertation, including the research approach and the work's relevance or contribution to the field. The outside review takes place after the dissertation has been completed and before the dissertation defense, allowing the student time to make revisions in response to the outside reader's comments. The outside reader also participates in the dissertation defense.

A copy of your dissertation must be submitted to your outside reader at least 3 weeks (ideally 5-6 weeks) before your defense date.

APPROVAL OF DISSERTATION

The completed dissertation—including abstract, introduction, and conclusion—must be submitted to and approved by the dissertation committee and the outside reader before the student can formally announce their defense. However, to accommodate practical scheduling issues, the student is encouraged to schedule a tentative date for the dissertation defense prior to receiving these approvals.

DISSERTATION DEFENSE

The student must pass the defense within 7 years of starting the program (excluding formal leaves of absence). The dissertation defense can be formally scheduled only after:

- the student has passed the qualifying exam; and
- the completed dissertation has been submitted to and approved by the dissertation committee and outside reader.

Students must notify the Doctoral Program Director, BUSPH Registrar, and EH Academic Program Administrator of the dissertation defense date **no later than 30 days prior** to the defense. The dissertation defense is a public event to which all faculty, staff, and doctoral students in the department, as well as any members of the public, are invited. The dissertation defense must be formally scheduled and the date publicly announced **at least 2 weeks before** the event. **At least 2 weeks prior** to their dissertation defense, the doctoral student must submit their written dissertation electronically to the EH Academic Program Administrator for their record and for anyone to read. This Department copy does not need to meet the Mugar Memorial Library specifications.

The doctoral candidate and all dissertation committee members must participate in the dissertation defense on the selected defense date. Both the doctoral candidate and the dissertation committee chair must be available on the selected defense date to appear in person at the defense, which must be held on the BU Medical Campus. Other committee members should appear in person for the defense; however, if they cannot, they may make arrangements to participate remotely.

At the defense, the student first presents their research for approximately 45 minutes to one hour. The dissertation advisor then invites questions, first from the dissertation committee and outside reader, and then from others. Anyone present may ask questions of the student, subject to the discretion of the chair. Following the defense, the thesis committee and the outside reader confer and must agree on final approval for granting of the doctoral degree. It is recommended that students reach out to Mugar Memorial Library **prior to their defense** to inquire about paperwork that their dissertation committee must sign (see Appendix B: Graduation Checklist).

Dates included in the Doctoral Graduation Calendar (see Section 6: Doctoral Graduation Deadlines and Procedures) represent the absolute deadlines (in each semester) for holding a dissertation defense. When scheduling their dissertation defense, students should allow sufficient time for making any final revisions recommended by their doctoral dissertation committee prior to the absolute deadline for submitting the approved dissertation to the Mugar Memorial Library in the required formatting.

Within one week after the dissertation defense, the dissertation committee chair must send written notification of the outcome of the defense to the Doctoral Program Director, who then shares this outcome with the Registrar.

DISSERTATION SUBMISSION

All theses and dissertations will be submitted to the Mugar Library electronically. Please visit http://www.bu.edu/library/guide/theses/ for a series of brief, informative videos that detail the submission process. A PDF guide is also available.

Conferment of the doctoral degree is contingent upon receipt of the dissertation final draft by the deadlines established by the Doctoral Graduation Calendar. Students must present the BUSPH Registrar with the Signed Approval Page signed by the student's first reader/committee chair, when the Registrar completes the dissertation transmittal paperwork. (See 'Reader signatures' at <u>Graduation Procedures for Doctoral Students</u>.) Failure to do so by the established deadline will require that the student submit a new graduation application and will defer the student's graduation to the following semester. Students must review the formatting of their approval page with Brendan McDermott, Thesis & Dissertation Coordinator, Mugar Memorial Library, Room 306 (<u>brendan@bu.edu</u>) before it is signed by your readers. The signed approval page will be uploaded separately from your dissertation or thesis as an administrative document. You can upload the page on your own or send an electronic copy to Nikki Longe

(<u>sphregr@bu.edu</u>), BUSPH Registrar. The approval page in the uploaded dissertation should remain blank. The original page should be delivered to Brendan McDermott.

Please note that, to be accepted by the Mugar Memorial Library, all doctoral dissertations must be formatted according to the guidelines described in the "Research Guide for Writers of Theses and Dissertations," which is available at: http://www.bu.edu/library/guide/theses/.

Students with questions about formatting or the dissertation submission process should contact Brendan McDermott (brendan@bu.edu), Thesis and Dissertation Librarian at the Mugar Memorial Library.

Doctoral Graduation Deadlines and Procedures

DOCTORAL GRADUATION DEADLINES

The following table includes dates that are especially important for your consideration as a doctoral student, although this serves as an example only, as the particulars of the years will not apply to you specifically:

Doctoral Graduation Deadlines*			
	August Award	January Award	May Award
Submit <u>Graduation Application</u> to the BUSPH Registrar	March 10th	June 10th	November 10th
Last date to hold dissertation defense	July 15th	November 15th	April 15th
Deadline for submission of approved and signed dissertation to Mugar Library	July 31st	November 30th	April 30th

^{*}Dates are subject to change. See <u>BUSPH Graduation Procedures</u> for most current information.

For a summary of timeline to defense and graduation, see Appendix B: Graduation Checklist.

TRANSITIONING FROM BUSPH

At the time that students submit their graduation applications to the Registrar, they should notify the program director, Academic Program Administrator, and Administrative Director to inform them of their approximate anticipated timeline for degree completion and transition. Students should discuss date of final stipend payment, health insurance coverage, and continuing study status with their advisor, Administrative Director, and program director. Students should remain registered in continuing study during the semester of graduation.

Student Policies

All students must adhere to all Boston University School of Public Health academic policies, available at http://www.bu.edu/sph/students/resources/policies/, and the University's Administrative Policies, available at http://www.bu.edu/dos/policies/lifebook/.

GRADING STANDARDS, SATISFACTORY ACADEMIC PROGRESS, AND DISMISSAL

Grading Standards

All SPH degree candidates must earn a minimum 3.0 GPA each semester to be in good academic standing and must have a minimum 3.0 GPA at SPH to graduate. Students in the PhD program in environmental health are required to achieve a minimum grade of B in all courses.

Please see the BUSPH Grading Policy at http://www.bu.edu/sph/students/resources/policies/ for information on grade changes and incomplete grades.

Satisfactory Academic Progress

Satisfactory academic progress will be assessed using the School of Public Health guidelines. More information on these guidelines can be found at the SPH Registrar's Office or Student Services. In addition, the EH Doctoral Committee may assess a student's progress at any time, and may place the student on warning or probation if, in its opinion, it is determined that the student has not made adequate progress toward meeting graduation requirements. This includes but is not limited to if they have not submitted an application to take qualifying exams (including a dissertation proposal) within three years of entering the program, or have not shown adequate progress on their dissertation in the last year as represented in the required Student Annual Progress Report.

A student on warning status will need to meet with the Doctoral Program Director and develop a learning plan for the next two semesters. The student must also meet with the Doctoral Program Director at least twice in the semester.

If a student is placed on probation, the Doctoral Program Director will send the student a letter specifying the reason(s) for probation, what is required to be removed from probation, and the deadline by which the requirement(s) must be met. After the student has fulfilled the relevant requirement(s), they must write a letter to the Doctoral Program Director that describes these steps. The Doctoral Program Director will respond in writing with a determination of whether the student has met the requirements and is removed from probationary status or has not met the requirements and will remain on probation; if needed, they will refer the matter to the Doctoral Committee for further action.

Dismissal

A student who is on probation for not making adequate progress will be dismissed from the doctoral program if they do not demonstrate substantial progress during the specified probationary period, or does not meet the requirement(s) of probation by the deadline specified by the Doctoral Committee.

A student who fails one of the qualifying examinations two times will be dismissed from the PhD program. Dismissal may also occur as a result of committing an act of academic dishonesty, as defined in the School's policy on Academic Dishonesty and is final.

REGISTRATION REQUIREMENTS

All doctoral students at Boston University School of Public Health, regardless of citizenship or immigration status, must register each fall and spring semester during their doctoral program until they officially graduate. This includes those who are registering for continuing study. Doctoral students must complete a **Course Approval** form (see Appendix C: Student Forms) and return to the EH Academic Program Administrator before registering for courses every semester and whenever they add/drop a course after initially registering.

Fall course registration: Return Course Approval form to Academic Program Administrator by July 1st. **Spring course registration**: Return Course Approval form to Academic Program Administrator by December 1st.

Leaves of Absence

A student may request a leave of absence of up to two semesters by writing a letter to the Doctoral Program Director and the BUSPH Registrar. BU policies for leaves of absence are described here: https://www.bu.edu/academics/sph/policies/withdrawal-leave-of-absence-and-reinstatement/

International students must have approval of ISSO to take a leave of absence and must work with ISSO when they are ready to return to their studies.

Students on leave of absence are not entitled to be advised officially by their advisers during a leave of absence, nor do they have library privileges. It has been possible for students on leave to maintain their email accounts.

PROGRAM TIME LIMIT

The Boston University School of Public Health requires all doctoral students to complete their degree requirements within 7 years of entering the doctoral program. A typical program might consist of the following: one to two years for completing the course work, one year for passing the qualifying examination and submitting a dissertation proposal, and two years for researching and writing the dissertation. Any extensions of the overall time limit must be requested in writing to the Doctoral Program Director with documentation of the extraordinary circumstances creating the delay and a date by which the requirements will be met. The request must be reviewed and approved by the EH Doctoral Committee. A student who does not meet the time limits established by the program may be dismissed from the program without a degree.

INTERNATIONAL STUDENTS

International Students and Scholars Office (ISSO)

The ISSO provides professional expertise on immigration and employment issues to students, faculty, and staff at Boston University. The ISSO advising team is available either in-person or virtually to answer questions (see https://www.bu.edu/isso/contact/isso-advisor-on-call-for-student/).

Contact Information:

888 Commonwealth Avenue

South Entrance, 2nd Floor Boston, MA 02215 Phone: (617) 353-3565 Email: isso@bu.edu

https://www.bu.edu/isso/

Students who have any questions regarding their required registration or necessary documents for travel or study should contact the ISSO.

Maintaining Visa Status

To remain lawfully in the United States during their doctoral studies, international students must obey the laws regulating F-1 and J-1 visa status. These regulations include, but are not limited to, registering for a fulltime course of study (whether by taking 12 or more credits or via registering for Continuing Study during all fall and spring semesters), limiting travel outside the U.S. to no more than 5 months at a time, and maintaining a current and valid I-20. For a complete discussion of these requirements, please visit the ISSO website:

Students on an F-1 visa: http://www.bu.edu/isso/students/current/f1/status/ Students on a J-1 visa: https://www.bu.edu/isso/administrators/advising-current-students/j1/

Continuing Study

International students holding F-1 or J-1 non-immigrant status and who are in residence at Boston University must meet the requirements of their visa, in particular full-time enrollment. Full- time enrollment is achieved by registration for 12 or more credits of academic coursework, or by registration in Continuing Study with additional full-time certification ("Certified Full-time") coding by the SPH Registrar. International students must check in at the Boston University International Students and Scholars Office (ISSO) when they first arrive at Boston University and then complete "Semester Verification" in each subsequent semester to ensure that they remain in lawful status. Students who are not full-time by virtue of academic course load (12 credits or more) or who are not certified full time by enrolling in continuing study will be considered in violation of their immigration status. Students who violate their status are subject to the penalties prescribed in relevant immigration laws.

Completing the Dissertation

Regardless of when they participate in graduation ceremonies, international students officially complete their doctoral studies when they submit the final version of their dissertation and when Boston University certifies that they have successfully completed all degree requirements. Please note that all students who will complete and submit their dissertation during the summer must be registered as continuing students during the summer semester to maintain lawful F-1 status. Otherwise, students must register in every fall and spring semester.

IN-PERSON RESIDENCY EXPECTATIONS

All doctoral students are expected to be in person during their time in the program, and they are required to spend a minimum of 6 semesters (i.e., 3 years) in residence. There may be instances where students who have completed in-person requirements for the program (i.e., coursework, teaching expectations, qualifying exams, and research that needs to be in person) need to complete the program remotely, for personal or other reasons. These instances are reviewed on a case-by-case basis through discussions among the student, advisor, and program director. If consensus is not reached, the student may appeal the decision and present their justification to the Doctoral Committee. Decisions for students to go remote

should be communicated, at a minimum, to the advisor, program director, Administrative Director, and Academic Program Administrator. Students who are approved to work remotely should update their contact information with the Student Employment Office to reflect their new address and out-of-state status, if applicable.

WORK HOURS AND EXPECTATIONS

All EH PhD students are expected to participate full-time (roughly 40 hours per week) on program-related activities (coursework, research rotations, dissertation research, etc.). This is consistent with expectations for trainees being supported by federal grants (e.g., <u>National Institutes of Health</u>).

VACATION POLICY

The vacation policy for PhD students at BU can be found here: https://www.bu.edu/academics/policies/vacation-policy-for-phd-students/

Students are expected to communicate and coordinate with their advisor in a timely manner about requested vacation time.

Student Resources & the BUSPH Community

KEY RESOURCES: ONBOARDING INFORMATION AND EH DEPOT

Upon starting the PhD program at BUSPH, students receive a link to the **Onboarding Information for EH PhD Students.** This is a document that provides helpful links and information about administrative processes and everyday student life to get you started in the department. This includes contact information, communication systems information, quick links to EH-specific content, DEI information, housing resources, student organization information, and other resources.

Another key resource that students will receive access to upon starting the PhD program is the **EH DEPOT**. This is an EH-centralized resource to help all members of the EH department with administrative processes in the department, with specific sections dedicated to academics, administration, HR, and research and grants.

Questions about either of these documents should be addressed to the Academic Program Administrator.

COMMUNICATIONS

All official communications from BUSPH will be sent to your BU email so please be sure to activate a BU email account as soon as possible after you accept admission to the program. You may elect to have this email forwarded to an alternative email account if you wish. You should regularly check and clean out your BU email so that the mailbox has sufficient space to accept messages.

There are several ways to stay in touch with faculty and other students and to be informed about events and opportunities in the EH department. Communication systems in EH and BUSPH are summarized in the **Onboarding Information for EH PhD Students** document.

SUPPORT FOR STUDENTS WITH DISABILITIES

BU strives to create a positive learning environment that is accessible by all. <u>Disability & Access Services</u> provides services and support to ensure that students are able to access and participate in all opportunities available at BU. We encourage students to contact and utilize the resources of Disability & Access Services. This is the office to contact with regards to student accommodations.

ADDITIONAL RESOURCES

BU's <u>Professional Development & Postdoctoral Affairs (PDPA) Office</u> offers programs, resources, and services that are tailored to meet the specific needs of doctoral students (as well as postdoctoral scholars and their faculty mentors).

One of the many tools provided by the PDPA is <u>PhD Progression</u>. This is an online training program that provides students with modules, or badges, to support career & professional development during the PhD program, and help students prepare for their post-PhD career. Participation is optional but encouraged.

FINANCIAL INFORMATION

For information about financial issues while in the PhD program, students should refer to the Financial Information section of the **Onboarding Information for EH PhD Students**. The following is a list of frequently asked questions that are addressed in that document. For specific questions, contact the Administrative Director.

- How and when will I get paid while in the EH PhD program?
- O What do I need to do to ensure that my student account is paid and managed correctly?
- What do I need to know about Health Insurance?
- Who can I speak with about questions on taxes?
- How do I book conference travel and get reimbursed?
- What travel and other items does the T32 training grant support?
- o I am interested in submitting a pre-doctoral fellowship grant (F31) application. Where do I start?
- What happens if I am approved to work remotely during my time in the program?



Student Progress

The Environmental Health Doctoral Committee consists of the Chair of the department, the Doctoral Program Director, and several at-large members, and is involved in many aspects of the doctoral program, as detailed below. The Doctoral Committee also regularly evaluates student progress in the program.

Summarized here are key points from the preceding sections of this handbook, pertaining to: (a) key prerequisites or linkages between elements of the program; and (b) critical milestones that must be achieved for the student to continue in the program.

- (a) The following are key prerequisites that must be met during the course of the program:
 - Before taking the qualifying exam, the student must complete all relevant coursework, submit a written request to take the exam at least 2.5 months before they plan to do so, and gain the approval of the EH Doctoral Committee to take the exam;
 - Each research proposal must be approved by the dissertation committee before the student begins data collection or data analysis (as appropriate);
 - The dissertation defense can be formally scheduled only after the student has passed the qualifying exam, submitted the dissertation to the dissertation committee, and gained the dissertation committee's approval of the dissertation.
- (b) The following are milestones that must be met in order to continue in the program:
 - Submit an application to take qualifying exam no later than the end of the fifth semester;
 - Pass the qualifying exam on the first or second try;
 - Pass the dissertation defense within 7 years of starting the program.

If a student fails to meet any of these prerequisites or milestones, they are normally disqualified from continuing in the program.

If a student encounters a circumstance that makes it impossible or burdensome for them to meet one of these milestones, the student may submit a written petition to the EH Doctoral Committee requesting an extension. Only with the prior written approval of the EH Doctoral Committee may exceptions to these guidelines be made.

ADMINISTRATIVE REQUIREMENTS AND INFORMATION

In addition to meeting the academic requirements of the doctoral program, the student must meet certain administrative requirements.

Tracking student progress

The EH Doctoral Committee will review each student's progress every six months. Each student is responsible for completing an annual progress report (in June/July) and submitting to the student's advisor and to the Doctoral Program Director, or for seeing that necessary forms are completed and submitted. All completed forms must be submitted to the EH Academic Program Administrator. The forms are summarized in Appendix C: Student Forms.

Funding for doctoral studies

Each student's funding situation is different, and the specifics of funding (including research project/training grant and duration of funding) are included in each student's acceptance letter. Faculty will assist students in identifying potential funding opportunities (e.g., from federal grants, private foundations, etc.).

Continued funding is contingent upon the student's meeting the requirements of the program as described in this handbook. If the student's funding is jeopardized by their performance in the doctoral program, the EH Doctoral Committee will send a letter to the student describing their concerns and will meet with the student and their advisor to determine what needs to be done in order for the student to maintain their funding.

University requirements for the awarding of the PhD degree

Boston University will not confer the PhD degree unless certain requirements are met, including submission of an electronic copy of the student's dissertation to the Boston University Mugar Library. The deadline for submission of the dissertation is typically at least one month before graduation.

The student is responsible to find out about, and meet, all University requirements for graduating with the PhD, as distinct from the departmental requirements described in these program guidelines.

Appendix B

Graduation Checklist

Below is a summary of items to complete before graduation and can serve as a graduation checklist. Students should also refer to the <u>BUSPH Graduation Procedures</u> and check their individual status with the BUSPH Registrar's Office.

- ✓ There are graduation dates in August, January, and May of each year. To graduate on a specific date, **you must meet deadlines** as detailed in the <u>BUSPH Graduation Procedures</u>.
- ✓ As soon as you know you are nearing a defense date, submit an online SPH graduation application: https://www.bu.edu/sph/students/advising-and-registration/policies-and-procedures/forms/
- ✓ Full dissertation (abstract, intro, conclusion, 3 chapters) must be seen and approved (at least verbally) by your dissertation committee before formally announcing defense, but a tentative date can be scheduled prior to receiving approvals. No form is needed for that approval. This does not mean that committee might not request some edits or changes to the dissertation after the defense.
- ✓ About 6-8 weeks before defense: advisor and committee identify outside reader.
- ✓ At least 3 weeks, and ideally 5-6 weeks, before defense date: send copy of full dissertation to outside reader. The outside reader should be given ample time to review.
- ✓ At least 30 days before defense date: contact Brendan McDermott (brendan@<u>bu.edu</u>) at Mugar Memorial Library for questions about formatting and procedures for submission to library after defense.
- ✓ At least 30 days before defense date: notify Program Director and Academic Program Administrator of defense date.
- ✓ At least 2 weeks before defense date: share copy of full dissertation with department (send to Program Director and Academic Program Administrator); department copy does NOT need to meet Mugar Library specifications.
- ✓ At the defense: it is helpful to have signature pages, formatted per library specifications, so that ink signatures can be obtained from all committee members at once upon successful completion of the defense. The signature page must be signed by your dissertation committee and outside reader. Directions and example of the signature page can be obtained from Brendan McDermott.
- ✓ Typically, electronic copy of dissertation must be submitted to Mugar at least 1 month before *graduation*. (If students defend in August, graduation date would be the following January, so dissertation must be submitted to Mugar at least by December. If students defend by July 15th, graduation date would be August, so dissertation must be submitted to Mugar by July.)

- ✓ Students will be asked to complete the BU Doctoral Exit Survey around graduation time.
- ✓ Ask the Doctoral Program Director to confirm the defense outcome with the BUSPH Registrar's Office
- ✓ Please work with Brendan McDermott (brendan@bu.edu, 617-353-9387) regarding dissertation formatting and submission to Mugar Memorial Library. The dissertation publication guidelines can be found here: http://www.bu.edu/library/guide/theses/.
- ✓ Please check with Brendan McDermott regarding specific deadlines. All dissertations must be submitted to the Mugar Library electronically. Please visit http://www.bu.edu/library/guide/theses/ for a series of brief, informative videos that detail the submission process.

Appendix C

Student Forms

This section summarizes forms needed at various stages during the EH PhD program. All updated forms can be found on the **EH DEPOT**. Completed forms should be returned to the EH Academic Program Administrator and/or to the individual(s) specified below after required signatures have been obtained.

1. TRANSFER CREDIT/WAIVER REQUEST FORM

- o Complete if applicable for waiving courses and/or transferring credit
- See Section 2 for a description of how to submit a transfer credit/waiver request
- Submit to SPH Registrar (cc: EH Academic Program Administrator) after reviewing with advisor and doctoral program director

2. COURSE APPROVAL FORM

- Complete in consultation with advisor <u>before</u> registering for courses (including auditing) and/or making schedule changes <u>every</u> semester
- Submit to EH Academic Program Administrator (cc: advisor)

3. RESEARCH ROTATION PROPOSAL

- o Complete before the start of each research rotation
- Collect signature from faculty research rotation mentor, advisor, and doctoral program director
- Submit to EH Academic Program Administrator

4. DOCTORAL CONTINUING STUDY STATUS FORM

- o Complete when all coursework has been completed
- Collect signature from doctoral program director
- Submit to SPH Registrar (cc: EH Academic Program Administrator)

5. REQUEST TO COMPLETE QUALIFYING EXAM FORM

- Submit upon completion of coursework and by the end of the 5th semester
- Submit with research proposal, annotated unofficial transcript, and list of research advisors
- o Collect signatures from advisor and doctoral program director
- Submit to EH Academic Program Administrator

6. REQUEST TO FORM DISSERTATION COMMITTEE FORM

- Submitted upon completion of the qualifying exam (within 6 months of passing exam)
- Submit to EH Academic Program Administrator (cc: advisor, doctoral program director)