

# GEOGRAPHY AND ENVIRONMENTAL ENGINEERING, PHD

## Geography and Environmental Engineering, PhD

A PhD student in the Department of Environmental Health and Engineering will explore the current state of knowledge in their field. Information and ideas developed by others are critically examined and placed in proper context. Subject areas are identified that are important to achieving the goals of the discipline, but which have not been explored or developed. The student will propose new research to improve understanding in this key area.

The goals for students in our Ph.D. program are:

- to develop reasoning skills that can be applied to new and unanticipated issues;
- learn how to pose questions and answer them in a logical manner;
- acquire a depth of understanding and technical knowledge in a particular study area, on par with others worldwide; and
- make a significant contribution to our understanding in this particular study area.

The emphasis in the Ph.D. degree is upon a sound foundation in the fundamentals required in a given area with considerable flexibility in course selection determined by the interests and background of each graduate student. Doctoral students must complete their formal coursework within their first two years of the program. The coursework should cover both the student's principal research area and include some breadth. Students may request to move to non-resident status in their final semester, with the approval of the department and Dean's Office once they have completed all exams and a defense date has been scheduled.

All students must pass departmental and Graduate Board oral examinations for the doctorate. Usually these examinations are taken after two years of academic work. Research leading to the dissertation should make an original contribution to the chosen field of specialization, and the result must be worthy of publication. A final dissertation defense that involves an open seminar and a closed oral examination is required of all EHE doctoral students. More information can be found in the departmental advising manual.

## Program Requirements

Research in Environmental Health and Engineering is diverse, however we believe all EHE students will gain from participating in courses that provide a foundation before pursuing their unique curriculum.

All EHE doctoral students are required to register for the following department seminars. Additional course requirements are listed in the EHE Graduate Student Handbook (<https://publichealth.jhu.edu/departments/environmental-health-and-engineering/programs/graduate-programs/graduate-student-resources/>).

Code	Title	Credits
EN.570.841	Wolman Seminar- Graduates (every semester)	1
PH.180.860	EHE Student Seminar & Grand Rounds (once per year in Years 2-4)	1

Doctoral students housed in WSE will also need to complete the following courses:

### TA Requirement

Doctoral students are expected to TA a minimum of one semester (or three term-length courses in BSPH) and will enroll in PH.180.613.71 to certify TA requirement completion.

### EHE Safety Seminars

Attendance is required at all of the scheduled meetings if any lab or field work is planned. This safety training is required each Fall semester for all students participating in lab-based research or field-based research. If there is a conflict with another class, students should ask the instructor to be excused from the other class. Watch for emails announcing the dates of the safety seminars.

### Responsible Conduct of Research (RCR)

All WSE graduate students who conduct research must take the Responsible Conduct of Research training. It is expected that this training is conducted prior to participating in any research, preferably in the first semester of coursework. Students will not be able to graduate until this requirement is satisfied. PhD students must take the in-person version of this course, AS.360.625 Responsible Conduct of Research.

### Academic Ethics Course

This WSE requirement is a 20-minute online tutorial to help educate all new graduate students about their academic and ethical responsibilities – all new students are required to complete this and receive a passing grade of four out of four. Students must successfully complete the online tutorial and quiz within the first eight weeks of their first semester in the graduate program. Students are automatically enrolled in the course. Students will not be able to graduate until this requirement is satisfied.