ENVIRONMENTAL ENGINEERING (PHD)

The Environmental Engineering Program offers two graduate degrees, Master of Science (M.S.) and Doctor of Philosophy (Ph.D.). The Ph.D. in Environmental Engineering prepares students for research and teaching careers in environmental engineering, including industry, higher education, private foundations, and state, local, or federal government agencies.

Location

- Storrs Campus

Modality

- In Person

Environmental Engineering Ph.D. Requirements

If a student is admitted to the Ph.D. program with only a B.S. degree, at least 30 credits of coursework are required. If the student has a M.S. degree, the minimum requirement is 15 credits. However, if the M.S. degree is in a field other than Environmental Engineering, the student's advisory committee will determine the minimum number of credits required for coursework.

All Ph.D. students are required to take ENVE 5310 Environmental Transport Phenomena and ENVE 5320 Quantitative Methods for Engineers, and at least one other graduate level ENVE course. The remaining credits may be taken in any areas relevant to their research and professional development selected in consultation with the advisory committee. In addition, all students must register in the seminar course, ENVE 5094 Seminar in Environmental Sciences and Engineering, each semester it is offered.

Students must pass a Qualifying Examination taken after the student has completed at least 12 credits of coursework (with a M.S.) or 18 credits of coursework (with a B.S.). The program administers the examination twice a year, in January and in May. An approved Plan of Study must be filed with the Office of the Registrar before the Qualifying Examination can be taken. The Environmental Engineering Program administers the Qualifying Examination as both a written and an oral examination to test student mastery of core environmental engineering concepts and student ability to integrate concepts across disciplinary areas.

The General Examination is typically taken within one year after the qualifying examination. The student will prepare a dissertation proposal that outlines the proposed research for the dissertation. The student will defend their proposal in an oral examination to a minimum of five faculty, including all members of their advisory committee.

In addition to Graduate School requirements, the Environmental Engineering Program requires that a Ph.D. student must have three journal papers. One published or accepted for publication, one under review and one in the final stages of preparation. However, it is important that the three papers address a larger, coherent research question as outlined in the Dissertation Proposal and they are not isolated bodies of work.

1. Knowledge: Demonstrate appropriate breadth and depth of disciplinary knowledge and comprehension of the major topics, theories, and issues of the discipline, including demonstration of specialized knowledge of a sub-field sufficient to carry out substantive independent research.
2. Research/applied skills: Uses disciplinary methods and techniques ethically and professionally to apply knowledge, critically analyze, and create new knowledge.
3. Communication: Communicate proficiently and effectively, verbally and in writing, a structured, coherent academic presentation, representation, or argument that cogently summarizes their research, relevant literature, and its significance at the level appropriate to discipline.