ENVIRONMENTAL ENGINEERING (MS)

The Environmental Engineering Program offers two graduate degrees, Master of Science (M.S.) and Doctor of Philosophy (Ph.D.). The M.S. degree is awarded in Environmental Engineering and may be either research-based, Plan A, or coursework-based, Plan B. This includes advanced courses in basic scientific understanding, engineering design skills, and modeling of environmental processes. Plan B students often pursue work as professional engineers in government or private industry. Plan A students often pursue further Ph.D. studies or careers in research and development in government and private institutes. 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

Requirements

Plan A

A total of 30 credits are required for graduation, with a minimum of 21 credits of coursework in Environmental Engineering or related area, including ENVE 5310 and 5320, and a minimum of nine credits of GRAD 5950 Master's Thesis Research. A student may enroll in GRAD 5950 Master's Thesis Research credits at any time during the M.S. degree and it is their responsibility to coordinate with their research advisor and secondarily, with their research committee, on the research plan and requirements for graduation.

A plan A M.S. requires the submission of an M.S. thesis, in the form of a submission-ready manuscript for publication, and an oral defense for graduation. The oral defense fulfills the role of the final examination for the M.S. degree. The scope, content and length of the M.S. thesis results from the agreement between the research advisor and the student. An advisory committee of at least two additional faculty members will also weigh in on the originality and quality of the thesis prior to graduation. In general, the thesis should present the methodology and results of novel, independent research conducted by the student. Thus, plan A M.S. thesis cannot be solely literature reviews or replicate research already published in the scientific literature.

Plan B

A total of 30 credits are required for plan B Master's, with a minimum of 27 credits of coursework in Environmental Engineering or related area, including ENVE 5310 and 5320. The remaining credits may be used towards additional courses or towards a research project by taking ENVE 5020 Independent Graduate Study in Environmental Engineering.

The final examination for a plan B Master's is an oral or written exam on three core courses of Environmental Engineering: ENVE 5310 Environmental Transport Phenomena and two additional ENVE courses selected by the student. The exam will take place in the final semester before graduation and it will be administered by the advisory committee that will sign the Plan of Study and the Report on the Final Examination.

Learning Objectives

1. Knowledge: Demonstrate appropriate breadth and depth of disciplinary knowledge and comprehension of the major topics, theories, and issues of the discipline.
2. Research/applied skills: Uses, disaggregates, reformulates and/or adapts principal ideas, techniques or methods of the field of study ethically, professionally, and based on best practices of the discipline.
3. Communication: Communicate proficiently and effectively, verbally and in writing, a coherent argument or explanation summarizing aspects of the discipline.