

Department of Environmental Sciences and Engineering
University of North Carolina at Chapel Hill
Ph.D in Environmental Sciences and Engineering
Fall

Overview:

The PhD, a terminal degree, is intended for students with a strong background in the sciences or engineering and prepares graduates for careers in basic and applied research, education, advanced practice, and management in the field of environmental sciences and engineering.

Learning Objectives:

Upon satisfactory completion of a PhD degree in ESE, graduates will be able to:

- Conceive, develop, and conduct original research in environmental sciences and engineering;
- Develop new conceptual frameworks and new research methods that address problems in environmental sciences and engineering;
- Apply advanced methodologies to research projects in environmental sciences and engineering; and
- Demonstrate written and oral communication skills related to research issues in environmental sciences and engineering.

Success in achieving these learning objectives is measured by the successful completion of all degree requirements including formal course work; a comprehensive written examination; a preliminary oral examination; preparation of a dissertation; and final oral defense of the dissertation. All PhD students prepare a research proposal and present their work in the Departmental Seminar. Although not a requirement, most will present their work at national and international meetings and publish in the peer-reviewed literature.

Degree Requirements:

The requirements for the PhD are governed primarily by the Graduate School and include:

- Formation of a five-member committee tailored to the student's area of interest that guides all aspects of the student's study and research;
- Mastery of knowledge in the major area, for which the number of course hours will vary;
- Completion of a supporting program of study that consists of at least 15 semester hours of course work, or a formal minor;
- Completion of a research skill requirement, previously a foreign language, but now typically six semester hours in an area such as statistics, mathematics, or computer science;
- Completion of ENVR 400, the Departmental Seminar;
- Completion of ENVR 401, Unifying Concepts;
- Completion of a comprehensive examination consisting of written and oral components to examine the student's knowledge in the major and supporting or minor areas;
- Preparation, presentation, and defense of a dissertation proposal at the time of the oral component of the comprehensive examination; and
- Completion of a significant and original body of research, which requires a minimum of six semester hours of ENVR 994 (Doctoral Dissertation), preparation of a dissertation, and a public, oral dissertation defense.