

ENVIRONMENTAL SCIENCE, M.S.

Program Description

The environmental science program gives the student the broad multi-disciplinary subject matter and analytical tools necessary to be successful in such professions as consulting, industrial environmental management and environmental protection. Students from diverse science backgrounds apply their knowledge and skills to environmental problems, such as air pollution and control; water pollution and treatment; groundwater protection, contamination and remediation; solid and hazardous waste management.

Admission Requirements

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: www.marshall.edu/graduate/admissions/how-to-apply-for-admission (<http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission/>).

Each applicant must satisfy at least ONE of the following criteria:

- Score at the mean or above on the verbal GRE
- Score at the mean or above on the quantitative GRE
- Score at the mean or above on the analytical GRE
- Score at the mean or above on the Miller Analogies Test
- Have an undergraduate GPA of 2.50 or above
- Have passed the Fundamentals of Engineering exam and/or the Professional Engineering exam

In addition to the general requirements all students entering the graduate Environmental Science program must have completed prior to admission the following courses **or** their equivalent:

CHM 205 General, Organic, and Biochem and MTH 130 College Algebra with a grade of C or better, **and** a minimum total of **five** (5) courses/competencies, relevant to environmental science, from the following:

- Chemistry (200 level or above);
- Physics (200 level or above);
- Biology; Geology; Geography; Statistics; Soil Science; Law; Health and Economics; or
- 10 years relevant work experience.

Program Requirements

Students must complete 36 graduate credit hours at the graduate level, including at least 24 credit hours at Marshall University. The degree consists of 9-12 credit hours of core courses; 6 credit hours of required courses; and 18-21 credit hours of electives. At least 18 credit hours must be at the 600 level.

Students may choose to complete either the project option or the thesis option, after consultation with their academic advisor. Students must have a project or thesis proposal approved by their project or thesis advisor prior to enrolling in project (TE 699 Comprehensive Project) or thesis (ES 680 Thesis).

Project Option. The comprehensive project involves the application of coursework completed as part of the degree to a practical problem. Students will work with their advisors to identify an appropriate

project and scope. Students must prepare a formal written report and deliver an oral presentation to a committee. Students register for a Comprehensive Project (TE 699, 3 hrs.) during the semester in which their project will be completed and presented, but preliminary work on the project may commence before that semester.

Thesis Option. The thesis option involves the completion of 6 hours of research (ES 680) under the direction of an advisor on an approved project. Students must summarize their work in the form of a formal, written document and successfully defend the thesis before a committee. Thesis work is typically conducted over two semesters.

Plan of Study

Code	Title	Credit Hours
Core Courses		
Select one of the following:		3
EM 660	Project Management	
ES 620	Environmental Management Sys	
TM 610	Mgmt of Innovation & Tech	
ENGR 610	Applied Statistics	3
TE 699	Comprehensive Project	3
or ES 680	Thesis	
Additional Degree Requirements		
<i>Required Courses</i>		
ES 514	Environmental Risk Assessment	3
Select one of the following:		3
ES 550	Environmental Law & Policy	
ES 640	Groundwater Princ & Monitoring	
ES 655	Environmental Ethics	
Electives		21
On completion of the M.S. in Environmental Science degree program the student should have the requisite scope of knowledge and competency in specific environmental subject matter. Students are required to take 18-21 credit hours of elective courses and use them to satisfy proficiency courses. Electives can be chosen from Environmental Science or any program within CECS. Additionally, electives from the College of Science, Department of Public Health, or Department of Geography will generally be approved. Graduate courses from other programs will be considered. The required and elective courses should be outlined in the Plan of Study. The Plan of Study should be developed in cooperation with and signed by the student's advisor and should be completed prior to registration for the 12th credit hour.		
Total Credit Hours		36

- ¹ To fulfill the Core requirement, 3 credit hours must be satisfied by the TE 699 Comprehensive Project (to complete a comprehensive project) **or** 6 credit hours of ES 680 Thesis (to complete a thesis). Comprehensive projects and the resulting write-up tend to be based on the application of the Environmental Science degree to professional projects, whereas a thesis is written as an output of a research project.