

Environmental, Soil and Water Sciences, M.S.

Degree Offered

- Master of Science

Nature of the Program

M.S. in Environmental, Soil, & Water Sciences provides students the opportunity to take courses and conduct original, master's-level research in their areas of specialization. The educational experience obtained through courses and research is expected to provide students with the background and expertise to enter doctoral programs or professional careers as agronomists, entomologists, microbiologists, horticulturists, and plant pathologists or soil scientists. These disciplines are critical to maintaining agriculture and forest productivity, solving environmental problems, and promoting economic development in the state.

Admissions for 2026-2027

In order for a student to be admitted to the program, the following admission criteria will be considered. The applicant normally must:

- The student must possess a baccalaureate degree from a college or university, have at least a grade point average of 3.0 on a 4.0 scale,
- The student must have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE).
- The student must provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- The student must submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree.
- International students must meet WVU's minimum score requirement for English language proficiency. (<https://graduateadmissions.wvu.edu/information-for/international-students/>)

Major Code: 0782

A candidate for the M.S. degree in Environmental, Soil, and Water Sciences must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Code	Title	Hours
Thesis Option:		
A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		3
STAT 511	Statistical Methods 1	
BIOS 501	Applied Biostatistics 1	
Select one of the following:		3
STAT 512	Statistical Methods 2	
BIOS 503	Applied Biostatistics 2	
Seminar		3
ESWS 796	Graduate Seminar	
Research		6
ESWS 797	Research	
Discipline-Oriented Coursework *		15
(AEM, AGRN, BIOL, CE, ENGR, ENVP, ESWS, FHYD, FMAN, FOR, GEN, GEOG, GEOL, MINE, PLSC, RESM)		
Plan of Study		
Thesis		
Total Hours		30

Code	Title	Hours
Non-Thesis Option:		
A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		3
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
BIOS 501	Applied Biostatistics 1	
BIOS 503	Applied Biostatistics 2	
Graduate Chemistry/Biochemistry Course		3
AGBI 610	General Biochemistry	
AGBI 612	General Biochemistry	
ESWS 516	Soil Chemistry	
Seminar		3
ESWS 796	Graduate Seminar	
Teaching Practicum		2
ESWS 790	Teaching Practicum	
Discipline-Oriented Coursework *		15
(AEM, AGRN, BIOL, CE, ENGR, ENVP, ESWS, FHYD, FMAN, FOR, GEN, GEOG, GEOL, MINE, PLSC, RESM)		
Independent Study		3
ESWS 795	Independent Study	
Electives		7
Plan of Study		
Total Hours		36

Major Learning Outcomes

ENVIRONMENTAL, SOIL AND WATER SCIENCES

Students will demonstrate detailed knowledge of their particular research area and fundamental knowledge of other areas relevant to environmental soil and water sciences.

Students will demonstrate the ability to read and understand, peer-reviewed scientific literature relevant to their work.

Students will employ technical skills in the laboratory, greenhouse, and/or field to acquire novel, high-quality data, and analytical skills to interpret the data to draw conclusions that are valid and meaningful.

Students will communicate effectively in writing and orally about scientific concepts and the results of their research.

Graduates of the program will gain skills that will help them be employed in a relevant professional position.