Energy Environments, M.S.

Degree Offered

- Master of Science

Nature of the Program

The Davis College of Agriculture, Natural Resources & Design at West Virginia University offers a Master’s of Science in Energy Environments to complement two popular BS degrees in the College (Energy Land Management and Energy & Environmental Resource Management). The mission of the MS in Energy – Environments is to prepare students with the advanced coursework and practical work and research experience needed to succeed in professions that are rapidly developing at the intersection of energy and the environment. The program will meet this mission by offering students a mix of foundational coursework in science, ethics, project management, and natural resource economics with specialized coursework tailored to the students’ interests, including tracks in water resources management, energy and environmental policy, and GIS and spatial analysis.

Admissions

Students admitted to the Davis College and the MS in Energy Environments degree program must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant’s professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant’s goals and objectives relative to receiving a graduate degree.

*International students must meet WVU’s minimum score requirements for English language proficiency (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2023-2024/international-graduate-applicant/).

Admission Requirements 2024-2025

The Admission Requirements above will be the same for the 2024-2025 Academic Year.

Major Code: 0750

A candidate for the M.S. degree in Energy Environments 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.

Minimum GPA of 3.0 is required in major coursework.

Required Coursework

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DSM 650</td>
<td>The Creative Economies</td>
<td>3</td>
</tr>
<tr>
<td>ENLM 500</td>
<td>Advanced Negotiations and Ethics for Energy Land Managers</td>
<td>3</td>
</tr>
<tr>
<td>EWS 525</td>
<td>Principles of Water Resources</td>
<td>3</td>
</tr>
<tr>
<td>RESM 560</td>
<td>Advanced Energy Project and Program Management</td>
<td>3</td>
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Research or Capstone Experience *  

Select one of the following:

- ANRD 695 Independent Study
- RESM 695 Independent Study
- ANRD 697 Research
- RESM 697 Research

Elective Requirements (in consultation with Graduate Advisory Committee) **  

Total Hours

Plan of Study

<table>
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<tr>
<th>Requirement</th>
<th>Credits</th>
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<td>30</td>
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Students that register for three credit hours of independent study must complete a capstone project or professional internship. Students electing a professional internship must complete at least 180 hours of paid or voluntary work in a supervised work setting related to their field of study. All students must also submit a problem paper to the graduate committee and defend their work in a public forum to complete the capstone requirement. Students that register for three credit hours of research experience may lead to completion of a thesis, but a formal thesis is not required for this degree. Completion of a formal thesis would be expected to prolong the time it takes to complete the degree.

Students will select additional restricted electives across a range of topics in consultation with the student’s Graduate Advisory Committee. Independent Study, Professional Field Experience, Research, Seminar, and Teaching Practicum credits are limited to 12 total credits combined, and only three credits of each may be included on the graduate plan of study.

Learning Outcomes

Upon graduation, graduates of the MS in Energy Environments will:

- Possess in-depth, advanced knowledge in their discipline.
- Possess broad knowledge of related STEM disciplines.
- Understand and be able to articulate the relationships between energy extraction and use, environmental quality, and public policy within the broad context of sustainable development.
- Be able to develop technical solutions to energy and environmental problems that include the impact of law and public policy.
- Assess the economic realities of technical solutions, addressing such economic factors as market externalities, cost-benefit analysis, and the micro- and macroeconomic implications of the solutions produced.
- Exhibit professional communication skills and the ability to communicate effectively to technical audiences, the general public, the media, and policy makers.
- Adhere to codes of responsible conduct of research and behavior.