Earth System Science & Policy  
Master of Environmental Management

The graduate program in Earth System Science and Policy is organized around the field of environmental sustainability and offers three degrees: Master of Environmental Management, Master of Science, and Doctor of Philosophy. Sustainability science has emerged as an intellectually exciting, growing discipline that is a driving concept for major international scientific and environmental policy efforts. By bridging theory with practice, global and local perspectives, and scientific and social disciplines, sustainability science seeks to meet the needs of society while sustaining the life support systems of the planet.

The mission of the Masters of Environmental Management is to provide an integrated and creative learning environment that fosters intellectual growth, critical thinking, and practical engagement especially in management of the Earth system and resources, acquired through practical experience in an internship. The MEM program is a thematic one, emphasizing practical experience especially through an Internship, student-centered learning, and integration of knowledge across traditional disciplinary boundaries, and active dialogue both in and outside the classroom.

The Master of Environmental Management is a professional degree for those who seek careers as environmental managers or policymakers.

Admission Requirements
Applicants who are seeking admission to School of Graduate Studies must meet all the minimum general education requirements identified in the graduate catalog. In addition students must fulfill the requirements below for admission to Earth System Science and Policy M.E.M. degree program.

1. Hold a Bachelor's degree from an accredited college or university.
2. Have satisfactorily completed a minimum of college-level algebra plus 3 credits of college statistics or calculus.
3. Have completed a minimum of 6 semester credit hours in natural sciences and 6 semester credits in social sciences, e.g., economics, sociology, psychology, political science, anthropology/archeology, or related fields.
4. Have earned a minimum average GPA of 3.00 on a 4.00 scale, on all upper division college-level coursework.
5. Submit score from the Graduate Record Examination (GRE) General Test.
6. Satisfy the School of Graduate Studies' English Language Proficiency requirements as published in the graduate catalog.

Degree Requirements
Students seeking the Master of Environmental Management degree at the University of North Dakota must satisfy all general requirements set forth by the School of Graduate Studies as well as particular requirements set forth by the Earth System Science and Policy Department.

The overarching goal of all the degree programs offered in Earth System Science and Policy is to facilitate the acquisition of skills required to solve environmental problems or to seize opportunities presented by a changing environment. Much of the responsibility for learning rests upon the student.

1. Students enrolled in the MEM program will take the following sequences. Students will complete the basic two-semester core sequence of courses during their first year of study.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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2. A minimum of 36 credits, including three to nine credits for Internship is required.
3. At least one-half of the credits must be at or above the 500 level.
4. A maximum of one-fourth (usually 8-9 semester credits) of the credit hours required for the degree may be transferred from another institution.
5. By the end of the first semester the student will select a chair of her/his Advisory Committee and, in consultation with that chair, recommend membership on the Advisory Committee.
6. Students must file with the School of Graduate Studies an approved program of study before the completion of fifteen credits of coursework.
7. Students must maintain a GPA of 3.00, and comply with the requirements of the School of Graduate Studies. Grades poorer than “C” will not be accepted as fulfilling degree requirements.
8. Complete written and oral comprehensive examinations to qualify for candidacy in the MEM program. These will occur no later than one month before leaving for the internship and will entail a 5 to 15 page written description and an oral presentation of their intended internship project.
9. In place of a thesis, MEM students must submit a comprehensive written report of their internship with an appropriate organization. The written report will be in the form of an Independent Study Report, following the guidelines and procedures for such a report set by the School of Graduate Studies. Students shall make a final oral presentation to an audience from the ESSP program, stakeholders affected by their project, and relevant professionals.
10. All exams will be administered and evaluated by the student’s Advisory Committee.

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESSP 501</td>
<td>Earth System Science and Policy I</td>
<td>5</td>
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<tr>
<td>ESSP 501R</td>
<td>Earth System Science and Policy Recitation</td>
<td>3</td>
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<tr>
<td>ESSP 501L</td>
<td>Earth System Science and Policy Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>ESSP 502</td>
<td>Earth System Science and Policy II</td>
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</tr>
<tr>
<td>ESSP 502R</td>
<td>Earth System Science and Policy Recitation II</td>
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<td>ESSP 502L</td>
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<tr>
<td>Electives</td>
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<tr>
<td>ESSP 597</td>
<td>Internship</td>
<td>3-9</td>
</tr>
<tr>
<td>ESSP 997</td>
<td>Independent Study</td>
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<tr>
<td>Total Credits</td>
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<td>30-42</td>
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Faculty and Areas of Expertise

- **Michael Hill**, Ph.D., remote sensing, spatio-temporal analysis, grassland and savannas, land use/land cover change.
- **Andrei Kirilenko**, Ph.D., environmental modeling, model integration, climate change impacts, land use change, mitigation and adaptation.
- **Soizik Laguette**, Ph.D., remote sensing, biomass energy, precision agriculture, agronomy, teaching in adult outreach settings.
- **Rebecca Romsdahl**, Ph.D., environmental policy, human dimensions of global climate change, protected lands management, social survey research.
- **Jeffrey VanLooy**, Ph.D., physical geography, geomorphology, climate change, remote sensing, GIS
- **Xiaodong Zhang**, Ph.D., oceanography, hydrology, radiative transfer, remote sensing
- **Haochi Zheng**, Ph.D., environmental & resource economics, energy economics, ecological economics, development economics, applied/micro econometrics

Contact Information

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