

Environmental Science

The Environmental Science major provides students with an interdisciplinary view of environmental research, assessment, and management. The program at NMU offers students an opportunity to gain an understanding of how the physical, biological, and social sciences interact with each other to resolve complex, interdisciplinary environmental problems. The program is designed to prepare students for graduate study and a variety of professions dealing with both natural and human-made environments.

As concern for the environment grows, opportunities for Environmental Science graduates will increase in agencies and firms involved in areas such as engineering, biological control technologies, regulation and use of natural resources, and the remediation of contaminated sites.

In addition to the core courses, Environmental Science majors specialize in one of four concentrations: 1) Natural Resources, 2) Pollution Control and Remediation, 3) Water Resources, or 4) Renewable Energy Technologies.

Skills and Competencies

The Environmental Science major's course work will develop critical thinking, problem solving, and decision-making abilities. Strong communication skills, including writing and speaking, are absolutely necessary for a career in this field. Leadership skills are also beneficial. Environmental Scientist must be proficient in technical skills including: Geographic Information Systems and other computer skills, data analysis, analytical chemical procedures, and ecological principles. Students also become familiar with environmental policy and regulations. Many of these skills will be developed by hands-on learning and field research.

Course Work

This degree includes the following courses as part of the program requirements, and specific major requirements along with general education and graduation requirements.

Core (30 cr.)

- GC100 Physical Geography (4 cr.)
or GC101 Introduction to Environmental Science (4 cr.)
- GC202 Soils (4 cr.) *or*
GC255 Physical Geology (4 cr.)
- GC205 Introduction to Geographic Research (4 cr.)
- GC225 Introduction to Maps (2 cr.)
- GC235 Quantitative Methods (4 cr.)
- GC320 Environmental Policy and Regulation (4 cr.)
- GC335 Geographic Information Systems (4 cr.)
- GC488 Earth & Environmental Science Capstone Research or GC489 Human Impact Upon the Env. (4 cr.)

Concentration

Choose 16 credits from one concentration, with no more than 12 credits from one prefix without prior approval.

- Natural Resources (16 cr.)
- Pollution Control and Remediation (16 cr.)
- Water Resources (16 cr.)
- Renewable Energy Technologies (16 cr.)

Other required courses

- BI111 Introductory Biology: Principles (4 cr.)
- BI112 Introductory Biology: Diversity (4 cr.)
- CH111 General Chemistry I (5 cr.)
- CH112 General Chemistry II (5 cr.)
- MA161 Calculus I (4 cr.)
- PH201 College Physics I (5 cr.) *or*
PH220 Introductory Physics I (5 cr.)

Detailed course descriptions can be found at www.nmu.edu/bulletin.

Career Development

Excellent analytical, communication, math and computer science, and research skills are imperative along with a solid understanding of biological, chemical and physical processes. Gaining laboratory and field experience through internships is important. Although a minor is not required for this major, some minors might be helpful, depending upon the student's career goals. Education beyond the bachelor's degree is often desirable and may be required for some environmental fields.

Additional Considerations

Additional education, work experience, and specific training may be necessary for some occupations.

Take advantage of internship opportunities to gain experience with the profession.

Job Outlook

Starting salaries are contingent upon job title, geographic location, and the individual applicant's work experience and initiative. Employment of environmental scientists, depending on their occupation, is expected to grow at a rate of about 8%, faster than average. The field will have many openings in the coming years. Visit www.bls.gov/ooh for more information.

Potential Careers

NMU's Environmental Science Program prepares students for employment in many careers including the following:

- Air Quality Planner
- Alternative Energy Specialist
- Environmental Advocate
- Environmental Educator
- Environmental Impact Analyst
- Environmental Interpreter
- Environmental Lawyer
- Environmental Manager
- Environmental Planner
- Environmental Policy Specialist
- Environmental Scientist
- Environmental Technician
- Hazardous Materials Specialist
- Natural Resources Specialist
- Pollution Control Technician
- Public Health Officer
- Recycling Coordinator
- Risk Assessment Specialist
- Sustainability Analyst
- Waste/Landfill Manger
- Water Resources Specialist
- Water Quality Manager

Additional Resources and Information

For Career Planning and Opportunities:

Academic & Career Advisement Center
3302 C.B. Hedgcock
906-227-2971
www.nmu.edu/acac

Earth, Environmental, & Geographical Sciences
3001 Weston Hall
906-227-2500
eegs@nmu.edu
www.nmu.edu/eegs

For Job Search, Resume and Career Information:

Career Services
3502 C.B. Hedgcock
906-227-2800
www.nmu.edu/careers

For Information about NMU Student Organizations Associated with this Major Contact:

Center for Student Enrichment
1206 University Center
906-227-2439
www.nmu.edu/cse

EcoReps
ecoreps@nmu.edu

NMU Conservation Crew
nmucc@nmu.edu

NMU Hoop House
hoophouse@nmu.edu

Internet Resource Links:

www.careers.org
www.bls.gov/ooh

For Career Information from National Organizations:

www.aess.info - Assoc. for Env. Studies & Sciences
www.aag.org - American Assoc. of Geographers
<https://gammathetaupsilon.org/>



**NORTHERN MICHIGAN
UNIVERSITY**

MARQUETTE, MICHIGAN

The Academic & Career Advisement Center
2022



What to do with
a major in...

Environmental Science

