

University of Minnesota Crookston

ENVIRONMENTAL SCIENCE

The scope of environmental sciences encompasses a broad spectrum of fields from human health to global economy. It is an interdisciplinary science incorporating an understanding of biology, chemistry, earth sciences, water resources, and economics which allows students in environmental science to explore such questions as "where chemicals released in the environment go?" and "what impact they have?" There are undergraduate research opportunities available through the Crookston and Twin Cities campuses that allow students the opportunity to perform research projects - from studies of greenhouse gases to water quality.

Some golden nuggets to consider...

AREAS OF EMPHASIS

- Science
- Studies



STARTING SALARIES: \$41,000-60,000

CAREER PATHS

- Environmental Protection Specialists
- Water Quality Manager
- Environmental Health & Safety Specialist
- Geologists
- Ecotoxicologist
- Aquatic Scientist
- Forest Carbon Specialist



PROGRAM FEATURES

- Students go out into the field and perform studies in rivers and fields, as well as working in the campus labs.
- UMC students also have the opportunity to utilize facilities and work with scientists at Agricultural Utilization Research Institute (AURI) and the Northwest Research and Outreach Center (NWROC).

Small Campus. Big Degree.

Program Requirements & Curriculum

PROGRAM CORE REQUIREMENTS: 38 CREDITS

AGRO 3030 - Research Techniques in Agriculture and Natural Resources (3.0 cr)

BIOL 1805 - Nature of Life (2.0 cr)

BIOL 1009 - General Biology [BIOL SCI, PEOPLE/ENV] (4.0 cr)

BIOL 2032 - General Microbiology (4.0 cr)

BIOL 3420 - Ecotoxicology (3.0 cr)

BIOL 3899 - Pre-Internship Seminar (0.5 cr)

BIOL 3900 - Internship (1.0-2.0 cr)

BIOL 3901 - Post-Internship Seminar (0.5 cr)

ENSC 2055 - Hazardous Waste Worker Training (3.0 cr)

ENSC 3124 - Environmental Science and Remediation Techniques (3.0 cr)

ENSC 3720 - Fate of Chemicals in the Environment (4.0 cr)

ENSC 4022 - Risk Assessment and Environmental Impact Statements (3.0 cr)

ENSC 4100 - Capstone in Environmental Science (2.0 cr)

NATR 3374 - Ecology [BIOL SCI] (4.0 cr)







CHEMISTRY CORE REQUIREMENTS: 17 CREDITS

Some courses may also count towards the liberal education requirements.

CHEM 1061 - Chemical Principles I [PHYS SCI, PEOPLE/ENV] (3.0 cr)

CHEM 1062 - Chemical Principles II (3.0 cr)

CHEM 1065 - Chemical Principles I Laboratory [PHYS SCI, PEOPLE/ENV] (1.0 cr)

CHEM 1066 - Chemical Principles II Laboratory (1.0 cr)

CHEM 2301 - Organic Chemistry I (3.0 cr)

CHEM 2310 - Organic Chemistry Laboratory I (2.0 cr)

CHEM 3022 - Chemical Analysis in the Biological and Environmental Sciences (4.0 cr)

MATH & PHYSICS CORE REQUIREMENTS: 11 CREDITS

Some courses may also count towards the liberal education requirements.

MATH 1150 - Elementary Statistics [MATH THINK] (3.0 cr)

MATH 1271 - Calculus I [MATH THINK] (4.0 cr)

PHYS 1101 - Introductory College Physics I [PHYS SCI] (4.0 cr)

LIBERAL EDUCATION REQUIREMENTS

A minimum of 40 liberal education credits are required.

WRIT 3303 - Writing in Your Profession (3.0 cr)

COMP 1011 - Composition I [COMMUNICAT] (3.0 cr)

COMP 1013 - Composition II [COMMUNICAT] (3.0 cr)

ECON 1010 - Global Trade Economics [GLOB PERSP] (3.0 cr)

ECON 2101 - Microeconomics [HI/BEH/SSC] (3.0 cr)

SPCH 1101 - Public Speaking [COMMUNICAT] (3.0 cr)

TECHNOLOGY REQUIREMENTS

CHEM 3022 - Chemical Analysis in the Biological and Environmental Sciences (4.0 cr)or MATH 1150 - Elementary

Statistics [MATH THINK] (3.0 cr)







