# ENVIRONMENTAL SCIENCE, BACHELOR OF SCIENCE WITH A CONCENTRATION IN EARTH SCIENCES

Requirements

| Code | Title | Credits |
|---|---|---|
| **Required core courses:** | | |
| (Note that in the case of cross-listed courses, Environmental Science major must enroll in the ENVN section) | | |
| ENVN 2010 | ENVIRONMENTAL PROBLEMS AND SOLUTIONS | 2 |
| BIOL 1330 | ENVIRONMENTAL BIOLOGY | 3 |
| CHEM 1010 | CHEMISTRY IN THE ENVIRONMENT AND SOCIETY | 3 |
| or CHEM 3030 | ENVIRONMENTAL CHEMISTRY | |
| ENVN/GEOG/GEOL/ BIOL 4610 | ENVIRONMENTAL MONITORING AND ASSESSMENT | 3 |
| Minimum of 1 credit hour of ENVN 4800 must be completed (up to 3 credits can be applied to the major) | | |
| ENVN/BIOL 4800 | INTERNSHIP IN ENVIRONMENTAL MANAGEMENT AND PLANNING | 1-3 |
| ENVN/BIOL/GEOG/ PA 4820 | INTRODUCTION TO ENVIRONMENTAL LAW & REGULATIONS | 3 |
| **Also required:** | | |
| An approved course in statistics (BIOL 4110, STAT 1530, STAT 3000, PSYC 3130, SOC 2130) | | 3-4 |
| An approved GIS course (GEOL 2300, ENVN 4600, GEOG 1090, GEOG 4050) | | 1-4 |
| An approved course focusing on the human dimensions of environmental studies (ANTH 4250, ENVN 3180, ENVN 4270, SOC 4760, PHIL 3180, PSCI 4270) | | 3 |
| **Earth Sciences Concentration requirements:** | | |
| GEOL 1170 | INTRODUCTION TO PHYSICAL GEOLOGY | 4 |
| One course covering surface processes: | | |
| GEOL 4260 | PROCESS GEOMORPHOLOGY | 4 |
| or GEOL 4330 | SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION | |
| or GEOL 4640 | CRITICAL ZONE SCIENCE | |
| Select an ADDITIONAL 27 hours of geography/geology/ environmental science courses from the following: | | 27 |
| ENVN 4410 | WETLAND ECOLOGY AND MANAGEMENT | |
| GEOL 1180 | INTRODUCTION TO HISTORICAL GEOLOGY | |
| GEOL 2300 | GEOSCIENCE DATA ANALYSIS AND MODELING | |
| GEOL 2500 | SPECIAL TOPICS IN GEOGRAPHY-GEOLOGY | |
| GEOL 2600 | GEOHYDROLOGY | |
| GEOL 2750 | MINERALOGY | |
| GEOL 2754 | MINERALOGY LABORATORY | |
| GEOL 2760 | IGNEOUS AND METAMORPHIC PETROLOGY | |
| GEOL 2764 | IGNEOUS AND METAMORPHIC PETROLOGY LABORATORY | |
| GEOL 3300 | STRUCTURAL GEOLOGY | |
| GEOL 3310 | STRUCTURAL GEOLOGY FIELD METHODS | |
| GEOL 3400 | INTRODUCTION TO SEDIMENTARY GEOLOGY | |
| GEOL/GEOG 4260 | PROCESS GEOMORPHOLOGY | |
| GEOL 4400 | GEOPHYSICS | |
| GEOL/GEOG 4640 | CRITICAL ZONE SCIENCE | |
| GEOG 3510 | METEOROLOGY | |
| GEOG 4010 | CONSERVATION OF NATURAL RESOURCES | |
| GEOG/BIOL/GEOL 4100 | BIOGEOGRAPHY | |
| GEOG 4320 | CLIMATOLOGY | |
| GEOG/GEOL 4330 | SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION | |
| GEOG 4350 | GLOBAL CLIMATE CHANGE | |
| GEOG 4630 | ENVIRONMENTAL REMOTE SENSING | |
| **Required cognate courses:** | | |
| Select one of the following chemistry sequences: | | 13 |
| Sequence One: | | |
| CHEM 1140 & CHEM 1144 | FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY | |
| CHEM 2210 & CHEM 2214 | FUNDAMENTALS OF ORGANIC CHEMISTRY and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY | |
| GEOL 4540 | GEOCHEMISTRY | |
| Sequence Two: | | |
| CHEM 1180 & CHEM 1184 | GENERAL CHEMISTRY I and GENERAL CHEMISTRY I LABORATORY | |
| CHEM 1190 & CHEM 1194 | GENERAL CHEMISTRY II and GENERAL CHEMISTRY II LABORATORY | |
| CHEM 2210 & CHEM 2214 | FUNDAMENTALS OF ORGANIC CHEMISTRY and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY | |
| Select one of the following physics lecture and laboratory combinations: | | 5 |
| PHYS 1050 & PHYS 1054 | INTRODUCTION TO PHYSICS and INTRODUCTION TO PHYSICS LABORATORY | |
| PHYS 1110 & PHYS 1154 | GENERAL PHYSICS I and GENERAL PHYSICS LABORATORY I | |
| PHYS 2110 & PHYS 1154 | GENERAL PHYSICS I - CALCULUS LEVEL and GENERAL PHYSICS LABORATORY I | |
| **Total Credits** | | **75-81** |

## Writing in the Discipline

All students are required to take a writing in the discipline course within their major. For the Environmental Science major with a concentration in Earth Science, the writing in the discipline requirement can be fulfilled by completing GEOL 4950 or ENGL 3980.

**Freshman**

| **Fall** | | **Credits** |
|---|---|---|
| BIOL 1330 | ENVIRONMENTAL BIOLOGY | 3 |
| CHEM 1010 | CHEMISTRY IN THE ENVIRONMENT AND SOCIETY (*) | 3 |
| ENGL 1150 | ENGLISH COMPOSITION I (**) | 3 |
| MATH 1220<br>or MATH 1300 | COLLEGE ALGEBRA (***)<br>or COLLEGE ALGEBRA WITH SUPPORT | 3 |
| Humanities and Fine Arts/US Diversity | | 3 |
| *CHEM 1010: requires MATH 1220 (MATH 1300) or equivalent. | | |
| **ENGL 1150: requires EPPE score of 5 or appropriate placement via AP or ACT. | | |
| ***MATH: Please see the catalog for the most up-to-date prerequisites. | | |
| | **Credits** | **15** |
| **Spring** | | |
| CMST 1110<br>or CMST 2120 | PUBLIC SPEAKING FUNDS<br>or ARGUMENTATION AND DEBATE | 3 |
| ENGL 1160 | ENGLISH COMPOSITION II (*) | 3 |
| ENVN 2010 | ENVIRONMENTAL PROBLEMS AND SOLUTIONS (**) | 2 |
| GEOL 1170 | INTRODUCTION TO PHYSICAL GEOLOGY | 4 |
| Social Science / Global Diversity (GEOG 1020 suggested) | | 3 |
| *ENGL 1160: requires ENGL 1150, EPPE score of 6, or AP Score of 4 | | |
| **ENVN 2010: requires BIOL 1330 or GEOG 1050 or GEOL 1010 or concurrent enrollment | | |
| | **Credits** | **15** |

**Sophomore**

| **Fall** | | |
|---|---|---|
| CHEM 1140<br>& CHEM 1144 | FUNDAMENTALS OF COLLEGE CHEMISTRY<br>and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (*,**) | 5 |
| Approved GEOG/GEOL/ENVN Elective | | 3 |
| Approved GEOG/GEOL/ENVN Elective | | 4 |
| Humanities and Fine Arts | | 3 |
| *CHEM 1140: Please see the catalog for the most up-to-date prerequisites. | | |
| **CHEM 1180/1184 and 1190/1194 together can substitute for CHEM 1140/1144. | | |
| | **Credits** | **15** |
| **Spring** | | |
| CHEM 2210<br>& CHEM 2214 | FUNDAMENTALS OF ORGANIC CHEMISTRY<br>and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY (*,**) | 5 |
| Approved GEOG/GEOL/ENVN Elective | | 4 |
| Approved GEOG/GEOL/ENVN Elective | | 3 |
| Social Science | | 3 |
| *CHEM 2210: requires CHEM 1140/1144 or CHEM 1190/1194 with a C- or better. CHEM 2214 must be taken concurrently. | | |
| **CHEM 2250 and 2260/2274 together can substitute for CHEM 2210/2214. | | |
| | **Credits** | **15** |

**Junior**

| **Fall** | | |
|---|---|---|
| GEOL 4540 | GEOCHEMISTRY | 3 |
| Approved GIS Course | | 4 |
| Approved GEOG/GEOL/ENVN Elective | | 4 |
| Humanities and Fine Arts* | | 3 |
| *HFA – must be in a 2nd discipline | | |
| | **Credits** | **14** |
| **Spring** | | |
| ENGL 3980 | TECHNICAL WRITING ACROSS THE DISCIPLINES (*) | 3 |
| PHYS 1050<br>& PHYS 1054 | INTRODUCTION TO PHYSICS<br>and INTRODUCTION TO PHYSICS LABORATORY (**, ***,^) | 5 |
| Approved GEOG/GEOL/ENVN Elective | | 4 |
| Social Science# | | 3 |
| *ENGL 3980: requires ENGL 1160, or EPPE score of 7, or AP score of 5 | | |
| **PHYS 1050: HS algebra or equivalent | | |
| ***PHYS 1054: HS algebra or equivalent; PHYS 1050 prior or concurrent | | |
| ^The two-semester sequence of PHYS 1110/1154 and 1120/1164 can be taken in place of PHYS 1050/1054. | | |
| #SS – must be in a 2nd discipline | | |
| | **Credits** | **15** |
| **Summer** | | |
| ENVN 4800 | INTERNSHIP IN ENVIRONMENTAL MANAGEMENT AND PLANNING (*) | 1 |
| *ENVN 4800: requires permission of instructor. | | |
| | **Credits** | **1** |

**Senior**

| **Fall** | | |
|---|---|---|
| ENVN/GEOG/GEOL/BIOL 4610 | ENVIRONMENTAL MONITORING AND ASSESSMENT (*) | 3 |
| ENVN 4820 | INTRODUCTION TO ENVIRONMENTAL LAW & REGULATIONS (**) | 3 |
| Approved GEOG/GEOL/ENVN Elective*** | | 3 |
| Approved GEOG/GEOL/ENVN Elective*** | | 4 |
| Elective course*** | | 3 |
| *ENVN/GEOG/GEOL/BIOL 4610 – requires permission of instructor. | | |
| **ENVN 4820 – requires permission of instructor. | | |
| ***120 total credits are required for a degree, with a minimum of 18 upper level (3000-4000) credits in the major and 27 upper level credits throughout the degree. Selecting 3000-4000 level electives or course options can help you reach these minimums. | | |
| | **Credits** | **16** |
| **Spring** | | |
| Approved GEOG/GEOL/ENVN Elective | | 3 |
| Statistics course | | 3 |
| An approved course focusing on the human dimensions of environmental studies | | 3 |
| Elective course* | | 3 |
| Elective, if needed to reach 120* | | 3 |
| *120 total credits are required for a degree, with a minimum of 18 upper level (3000-4000) credits in the major and 27 upper level credits throughout the degree. Selecting 3000-4000 level electives or course options can help you reach these minimums. | | |
| | **Credits** | **15** |
| | **Total Credits** | **121** |

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult an advisor in your major program for further guidance.

This plan is not a contract and curriculum is subject to change

**Additional Information About this Plan:**
**University Degree Requirements**: The minimum number of hours for a UNO undergraduate degree is 120 credit hours. Please review the requirements for your specific program to determine all requirements for the program. In order to graduate on-time (four years for an undergraduate degree), you need to take 30 hours each year.

**Placement Exams:** For Math, English, Foreign Language, a placement exam may be required. More information on these exams can be found at https://www.unomaha.edu/enrollment-management/testing-center/placement-exams/information.php

**Transfer credit or placement exam scores may change suggested plan of study