

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

Environmental Science, Bachelor of Science with a Concentration in Earth Sciences Requirements

Code	Title	Credits
------	-------	---------

GENERAL EDUCATION REQUIREMENTS - 46 Hours Required

Minimum of "C-" required

Fundamental Academic Skills 15

ENGL 1150	ENGLISH COMPOSITION I	
ENGL 1160	ENGLISH COMPOSITION II	
GEOL 4950	SENIOR THESIS	
or ENGL 3980	TECHNICAL WRITING ACROSS THE DISCIPLINES	
CMST 1110	PUBLIC SPEAKING FUNDS	
or CMST 2120	ARGUMENTATION AND DEBATE	
MATH 1120	INTRODUCTION TO MATHEMATICAL AND COMPUTATIONAL THINKING	
or MATH 1100	DATA LITERACY AND VISUALIZATION	
or MATH 1130	QUANTITATIVE LITERACY	
or MATH 1140	QUANTITATIVE REASONING FOR HEALTHCARE PROFESSIONALS	
or MATH 1300	COLLEGE ALGEBRA WITH SUPPORT	
or STAT 1100	DATA LITERACY AND VISUALIZATION	
or STAT 1530	ELEMENTARY STATISTICS	

Distribution Requirements 31

Natural Science - From two disciplines and at least one lab - 7 hrs	
Social Science - From two disciplines - 9 hrs	
Humanities and Fine Arts - From two disciplines- 9 hrs	
Global Diversity - 3 hrs	
US Diversity - 3 hrs	

MAJOR REQUIREMENTS

**Course will satisfy UNO's General Education requirement

^Course requires pre-requisite(s)

Environmental Science Major with a Concentration in Earth Sciences - 75-81 Hours Required

Required coursework 15-17

(Note that in the case of cross-listed courses, Environmental Science majors must enroll in the ENVN section)

ENVN 2010	ENVIRONMENTAL PROBLEMS AND SOLUTIONS (^)	
BIOL 1330	ENVIRONMENTAL BIOLOGY (**)	
CHEM 1010	CHEMISTRY IN THE ENVIRONMENT AND SOCIETY (** ^)	
or CHEM 3030	ENVIRONMENTAL CHEMISTRY	
ENVN/GEOG/GEOL/BIOL 4610	ENVIRONMENTAL MONITORING AND ASSESSMENT (^)	

ENVN/BIOL 4800	INTERNSHIP IN ENVIRONMENTAL MANAGEMENT AND PLANNING (^)	
----------------	---	--

ENVN/GEOG/PA 4820	INTRODUCTION TO ENVIRONMENTAL LAW & REGULATIONS (^)	
-------------------	---	--

Select one of the following Statistics courses 3-4

BIOL 4110	STATISTICS FOR BIOLOGICAL SCIENCES (^)	
-----------	--	--

ENVN 2020	STATISTICS FOR LIFE AND ENVIRONMENTAL SCIENCE (^)	
-----------	---	--

STAT 1530	ELEMENTARY STATISTICS (** ^)	
-----------	------------------------------	--

STAT 3000	STATISTICAL METHODS I (^)	
-----------	---------------------------	--

PSYC 3130	STATISTICS FOR THE BEHAVIORAL SCIENCES (^)	
-----------	--	--

SOC 2130	SOCIAL STATISTICS (^)	
----------	-----------------------	--

Select one of the following GIS courses 1-4

ENVN 4600	GIS APPLICATIONS FOR ENVIRONMENTAL SCIENCE (^)	
-----------	--	--

GEOG 1090	INTRODUCTION TO GEOSPATIAL SCIENCES (** ^)	
-----------	--	--

GEOG 4050	GEOGRAPHIC INFORMATION SYSTEMS I (^)	
-----------	--------------------------------------	--

Select one of the following courses on the human dimensions of Environmental Studies 3

ANTH 4250	ENVIRONMENTAL ANTHROPOLOGY AND NATIVE PEOPLES OF THE GREAT PLAINS (^)	
-----------	---	--

ECON 3320	ENVIRONMENTAL ECONOMICS AND SUSTAINABILITY (^)	
-----------	--	--

ENVN/PHIL 3180	ENVIRONMENTAL ETHICS (^)	
----------------	--------------------------	--

ENVN 3310	SUSTAINABILITY AND THE ENVIRONMENT IN THE SPANISH-SPEAKING WORLD (^)	
-----------	--	--

ENVN/PSYC 4270	GLOBAL ENVIRONMENTAL POLITICS (^)	
----------------	-----------------------------------	--

ENVN 4390	THE NATURE OF THE PAST: AMERICAN ENVIRONMENTAL HISTORY, PRE-HISTORY TO THE PRESENT (^)	
-----------	--	--

SOC 4760	ENVIRONMENTAL SOCIOLOGY (^)	
----------	-----------------------------	--

Earth Sciences Concentration

GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY (**)	
-----------	---------------------------------------	--

Select one of the following covering surface processes 4

GEOL 4260	PROCESS GEOMORPHOLOGY (^)	
-----------	---------------------------	--

GEOL 4330	SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION	
-----------	---	--

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 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 4200	WATER QUALITY (^)
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 (^)
GEOL 4320	CLIMATOLOGY (^)
GEOG/GEOL 4330	SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION (^)
GEOL 4350	GLOBAL CLIMATE CHANGE (^)
GEOL 4630	ENVIRONMENTAL REMOTE SENSING (^)

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 (** ^)

College Breadth 0

College of Arts and Sciences' breadth requirement satisfied by this major

Bachelor of Science Cognate Requirement 0

See major.

ELECTIVES

Elective hours as required to reach a total of 120 hours

Environmental Science, Bachelor of Science with a Concentration in Earth Sciences Four Year Plan

Freshman		Credits
Fall		
BIOL 1330	ENVIRONMENTAL BIOLOGY	3
CHEM 1010	CHEMISTRY IN THE ENVIRONMENT AND SOCIETY (*)	3
ENGL 1150	ENGLISH COMPOSITION I (**)	3
MATH 1220 or MATH 1300	COLLEGE ALGEBRA (***) 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		Credits
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS 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		Credits
Fall		
CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY 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		Credits
CHEM 2210 & CHEM 2214	FUNDAMENTALS OF ORGANIC CHEMISTRY 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	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	3
PHYS 1050 & PHYS 1054	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	1
*ENVN 4800: requires permission of instructor.	
Credits	1
Senior	
Fall	
ENVN/GEOG/GEOL/BIOL 4610	3
ENVN 4820	3
Approved GEOG/GEOL/ENVN Elective***	3
Approved GEOG/GEOL/ENVN Elective***	3
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	15
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	120

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