GEOLOGY, BACHELOR OF SCIENCE

To obtain a B.S. with a major in Geology, a student must fulfill university, college, and departmental requirements.

Geology, Bachelor of Science Career Geology Track 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 (Writing in the Discipline Course)	
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)		
Geology Major, Geology Career - 65-74 Hours Required		
Required Coursework		**28**
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY (**)	
GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY (^)	
GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING (^)	
GEOL 2750	MINERALOGY (^)	
GEOL 2754	MINERALOGY LABORATORY (^)	
GEOL 3300	STRUCTURAL GEOLOGY (^)	
GEOL 3310	STRUCTURAL GEOLOGY FIELD METHODS (^)	
GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY (^)	
GEOL 4620	ADVANCED FIELD COURSE (^)	
Select one of the following		**4**
GEOL 4260	PROCESS GEOMORPHOLOGY (^)	
GEOL/GEOG 4640	CRITICAL ZONE SCIENCE (^)	
GEOL/GEOG 4330	SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION (^)	
Select one of the following		**3**
GEOL 4800	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE (** ^)	
GEOL 4950	SENIOR THESIS (** ^)	
Additional Geology or Geography courses in consultation with advisor		**12**
Additional Chemistry coursework		**4**
CHEM 1180	GENERAL CHEMISTRY I (** ^)	
CHEM 1184	GENERAL CHEMISTRY I LABORATORY (^)	
Select one of the following Chemistry options - 3-4 Hours Required		**3-4**
CHEM 1190	GENERAL CHEMISTRY II (^)	
CHEM 1194	GENERAL CHEMISTRY II LABORATORY	
OR		
GEOL 4540	GEOCHEMISTRY (^)	
Select one of the following Mathematics options		**3-9**
MATH 1950	CALCULUS I (^)	
MATH 1960	CALCULUS II	
OR		
MATH 1930	CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES (^)	
Additional Physics coursework		**5**
PHYS 2110	GENERAL PHYSICS I - CALCULUS LEVEL (^)	
PHYS 1154	GENERAL PHYSICS LABORATORY I (** ^)	
Select one of the following Physics options		**3-5**
PHYS 2120	GENERAL PHYSICS-CALCULUS LEVEL (^)	
PHYS 1164	GENERAL PHYSICS LABORATORY II (^)	
OR		
GEOL 4400	GEOPHYSICS (^)	
College Breadth (choose one option)		**15-30+**
Option 1: Complete any UNO minor or undergraduate certificate - 15+ hours		
Option 2: Additional General Education Requirements - 19+ hours		
Additional quantitative literacy - 3 hours		
Additional Social Science Gen. Ed. from 3rd Discipline - 3 hours		
Additional Humanities Gen. Ed. from 3rd Discipline - 3 hours		
HIST 1000 and HIST 1010 - 6 hours		
Additional Nat. and Physical Science w/ Lab - 4-5 hours		
Option 3: CAS comprehensive major (50+ hours) OR any second UNO major (30+ hours)		
Bachelor of Science Cognate Requirement		**0-15**
See advisor.		
ELECTIVES		
Elective hours as required to reach a total of 120 hours		

Geology, Bachelor of Science General Geology Track 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 (Writing in the Discipline Course)	
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)		
Geology Major, General Geology - 63-65 Hours Required		
Required Coursework		**28**
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY (**)	
GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY (^)	
GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING (^)	
GEOL 2750	MINERALOGY (^)	
GEOL 2754	MINERALOGY LABORATORY (^)	
GEOL 3300	STRUCTURAL GEOLOGY (^)	
GEOL 3310	STRUCTURAL GEOLOGY FIELD METHODS (^)	
GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY (^)	
GEOL 4620	ADVANCED FIELD COURSE (^)	
Select one of the following		**4**
GEOL 4260	PROCESS GEOMORPHOLOGY (^)	
GEOL/GEOG 4640	CRITICAL ZONE SCIENCE (^)	
GEOL/GEOG 4330	SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION (^)	
Select one of the following		**3**
GEOL 4800	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE (** ^)	
GEOL 4950	SENIOR THESIS (** ^)	
Additional Geology or Geography courses in consultation with advisor		**12**
An approved Statistics course		**3**
Other required coursework		**10**
CHEM 1140	FUNDAMENTALS OF COLLEGE CHEMISTRY (** ^)	
CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (** ^)	
PHYS 1110	GENERAL PHYSICS I (** ^)	
PHYS 1154	GENERAL PHYSICS LABORATORY I (** ^)	
Select one of the following options		**3-5**
PHYS 1120	GENERAL PHYSICS II	
PHYS 1164	GENERAL PHYSICS LABORATORY II (^)	
OR		
GEOL 4400	GEOPHYSICS (^)	
College Breadth (choose one option) - 15-30+ Hours Required		**15-30+**
Option 1: Complete any UNO minor or undergraduate certificate - 15+ hours		
Option 2: Additional General Education Requirements - 19+ hours		
Additional quantitative literacy - 3 hours		
Additional Social Science Gen. Ed. from 3rd Discipline - 3 hours		
Additional Humanities Gen. Ed. from 3rd Discipline - 3 hours		
HIST 1000 and HIST 1010 - 6 hours		
Additional Nat. and Physical Science w/ Lab - 4-5 hours		
Option 3: CAS comprehensive major (50+ hours) OR any second UNO major (30+ hours)		
Bachelor of Science Cognate Requirement		**0-15**
See advisor		
ELECTIVES		
Elective hours as required to reach a total of 120 hours		

Geology, Bachelor of Science Geology Career Track Four Year Plan

Freshman

Fall		Credits
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY	4
MATH 1930	CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES (*)	3
ENGL 1150	ENGLISH COMPOSITION I (**)	3
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
Humanities and Fine Arts		3
*MATH 1930: Requires MATH 1320 within the last two years, or Math ACT sub-score of 25 within the last two years, or appropriate Math Placement Exam score within the last two years. (As an alternative, students may opt to take MATH 1950 and MATH 1960 with proper placement.)		
**ENGL 1150: Requires appropriate placement via EPPE, AP, or ACT.		
	Credits	**16**

Spring

GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY (*)	4
CHEM 1180 & CHEM 1184	GENERAL CHEMISTRY I and GENERAL CHEMISTRY I LABORATORY (**)	4
ENGL 1160	ENGLISH COMPOSITION II (***)	3
Social Science		3

*GEOL 1180: Requires GEOL 1170 (Consult with your advisor prior to enrolling in this course)

**CHEM 1180: See the catalog for the most up-to-date prerquisites. Must take CHEM 1184 concurrently. CHEM 1180 & 1184 are part of the BS Cognate.

***ENGL 1160: Requires ENGL 1150 or appropriate placement via EPPE or AP.

Credits **14**

Sophomore

Fall

GEOL 2750 & GEOL 2754	MINERALOGY and MINERALOGY LABORATORY (*)	4
GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING (**)	3
Humanities and Fine Arts/Global Diversity		3
HIST 1000 or Minor/2nd Major Course***		3

*GEOL 2750: Requires GEOL 1170. GEOL 2754 must be taken concurrently.

**GEOL 2300: Requires GEOL 1010 or GEOL 1170 or GEOG 1030 or permission of instructor.

***A&S College Requirement Option.

Credits **13**

Spring

Approved GEOL Elective		4
PHYS 2110 & PHYS 1154	GENERAL PHYSICS I - CALCULUS LEVEL and GENERAL PHYSICS LABORATORY I (*)	5
Social Science/US Diversity		3
CHEM 1190 & CHEM 1194 or GEOL 4540	GENERAL CHEMISTRY II (**) or GEOCHEMISTRY	3-4

*PHYS 2110: Requires MATH 1930 for Geology majors, or Math ACT sub-score of 25, or appropriate Math Placement Exam score. PHYS 2110-1154 is a part of the BS Cognate.

**CHEM 1190: See the catalog for the most up-to-date prerequisites. Requires concurrent enrollment in CHEM 1194.

Credits **15-16**

Junior

Fall

GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY (*)	3
Approved GEOL Elective		3
Approved GEOL Elective		4
PHYS 2120 & PHYS 1164 or GEOL 4400	GENERAL PHYSICS-CALCULUS LEVEL (**) or GEOPHYSICS	3-5
HIST 1010 or Minor/2nd Major Course***		3

*GEOL 3400: Requires GEOL 2750 and 2754

**PHYS 2120: Requires PHYS 2110 and MATH 1960 or for Geology majors, Math 1930

***A&S College Requirement Option.

Credits **16-18**

Spring

GEOL 3300 & GEOL 3310	STRUCTURAL GEOLOGY and STRUCTURAL GEOLOGY FIELD METHODS (*)	4
GEOL 4260 or GEOG 4260 or GEOL 4640 or GEOG 4640 or GEOL 4330 or GEOG 4330	PROCESS GEOMORPHOLOGY (**,***) or PROCESS GEOMORPHOLOGY or CRITICAL ZONE SCIENCE or CRITICAL ZONE SCIENCE or SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION or SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION	4
Social Science#		3
Humanities and Fine Arts course^		3

*GEOL 3300: Requires GEOL 2750+2754

**GEOL 4260: Requires GEOG 1030 or GEOG 1050 or GEOL 1010 or GEOL 1170

***GEOL/GEOG 4640: Requires GEOL 1170 or GEOL 1010 or GEOG 1030; and one chemistry or physics course recommended. GEOL/GEOG 4330: Requires GEOL 1030 or GEOG 1050 or GEOL 1010 or GEOL 1170.

Social Science must be in a 2nd discipline.

^ HFA must be from 2nd discipline.

Credits **14**

Summer

GEOL 4620	ADVANCED FIELD COURSE (*,**)	6

*GEOL 4620 is usually taken in the Summer between Junior and Senior Years.

**GEOL 4620: Requires GEOL 1170; GEOL 1180; GEOL 2750; GEOL 2760; GEOL 3300

Credits **6**

Senior

Fall

GEOL elective		1
Additional Humanity/Fine Arts course for A&S or Minor/2nd Major course*		3
Additional Social Science for A&S or Minor/2nd Major course**		3
Elective or Minor/2nd Major course***		3
Elective or Minor/2nd Major course***		3

*A&S College Requirement Option. Humanities/Fine Arts course for A&S must be in a 3rd discipline.

**A&S College Requirement Option. Additional SS must be in a 3rd discipline.

***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 can help you reach these minimums.

Credits **13**

Spring

GEOL 4800 or GEOL 4950	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE (*,**) or SENIOR THESIS	3
ENGL 3980	TECHNICAL WRITING ACROSS THE DISCIPLINES (OR Elective***)	3
Elective***		3
Elective***		4

*GEOL 4800: Requires Senior status, major or area of concentration in geography or environmental science AND permission.

**GEOL 4950: Requires Senior status

***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 can help you reach these minimums.

Note: If students take GEOL 4950, the Writing in the Discipline requirement will be fulfilled. If students select GEOL 4800, they must take a separate WID course, such as ENGL 3980. ENGL 3980 or other approved WID courses require ENGL 1160.

	Credits	**13**
	Total Credits	**120-123**

Geology, Bachelor of Science Geology General Track Four Year Plan

Freshman

Fall		**Credits**
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY	4
MATH 1220 or MATH 1300	COLLEGE ALGEBRA (*) or COLLEGE ALGEBRA WITH SUPPORT	3-4
ENGL 1150	ENGLISH COMPOSITION I (**)	3
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
Humanities and Fine Arts		3

*MATH: Please see the catalog for the most up-to-date prerequisites.

**ENGL 1150: Requires EPPE, ACT, or AP placement.

	Credits	**16-17**

Spring

GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY (*)	4
CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (**)	5
ENGL 1160	ENGLISH COMPOSITION II (***)	3
Social Science		3

*GEOL 1180: Requires GEOL 1170 (Consult with your advisor prior to enrolling in this course)

**CHEM 1140-1144: Please see the catalog for the most up-to-date prerequisites. CHEM 1140+1144 is part of the BS Cognate.

***ENGL 1160: Requires ENGL 1150 with grade of C- or better, or EPPE or AP placement.

	Credits	**15**

Sophomore

Fall

GEOL 2750 & GEOL 2754	MINERALOGY and MINERALOGY LABORATORY (*)	4
Statistics course**		3
HIST 1010 or Minor/2nd Major Course***		3
Humanities and Fine Arts/Global Diversity		3

*GEOL 2750: Requires GEOL 1170. Must take GEOL 2754 concurrently.

**Most statistics courses require some sort of prerequisite. Statistics is a part of the BS Cognate.

***A&S College Requirement Option.

	Credits	**13**

Spring

PHYS 1110 & PHYS 1154	GENERAL PHYSICS I and GENERAL PHYSICS LABORATORY I (*)	5
Approved GEOL Elective		4
Social Science/US Diversity		3
HIST 1000 or Minor/2nd Major Course**		3

*PHYS 1110: Requires MATH 1220 (or MATH 1300 or higher), or Math ACT sub-score of 23, or appropriate Math Placement Exam score. PHYS 1110+1154 are part of the BS Cognate.

**A&S College Requirement Option.

	Credits	**15**

Junior

Fall

GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY (*)	3
GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING (**)	3
PHYS 1120 & PHYS 1164 or GEOL 4400	GENERAL PHYSICS II (***) or GEOPHYSICS	3-5
Approved GEOL elective^		4
Elective course (if doing GEOL 4400 above)		2

*GEOL 3400: Requires GEOL 2750 and 2754 or permission of instructor

**GEOL 2300: Requires GEOL 1010 or GEOL 1170 or GEOG 1030

***PHYS 1120: Requires PHYS 1110

^GEOL 4400: Requires GEOL 1170 and PHYS 1110/2110.

	Credits	**15-17**

Spring

GEOL 3300 & GEOL 3310	STRUCTURAL GEOLOGY and STRUCTURAL GEOLOGY FIELD METHODS (*)	4
GEOL/GEOG 4260 or GEOL 4640 or GEOG 4640 or GEOL 4330 or GEOG 4330	PROCESS GEOMORPHOLOGY (**,***) or CRITICAL ZONE SCIENCE or CRITICAL ZONE SCIENCE or SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION or SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION	4
Social Science#		3
Social Science for A&S or Minor/2nd Major course^		3
Elective course		1

*GEOL 3300: Requires GEOL 2750+2754

**GEOL 4260: Requires GEOG 1030 or GEOG 1050 or GEOL 1010 or GEOL 1170. Offered in Spring semesters of even years.

***GEOL/GEOG 4640: Requires GEOL 1170 or GEOL 1010 or GEOG 1030; and one chemistry or physics course recommended. Offered in Spring semesters of odd years. GEOL/GEOG 4330: Requires GEOG 1030 or GEOG 1050 or GEOL 1010 or GEOL 1170.

#Social Science must be in a 2nd discipline.

^Additional SS must be in a 3rd discipline.

Note: 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 can help you reach these minimums.		
	Credits	**15**
Summer		
GEOL 4620	ADVANCED FIELD COURSE (*,**)	6
*GEOL 4620 is usually taken in the Summer between Junior and Senior Years.		
**GEOL 4620: Requires GEOL 1170; GEOL 1180; GEOL 2750; GEOL 2760; GEOL 3300		
	Credits	**6**
Senior		
Fall		
Approved GEOL elective		3
Humanities and Fine Arts*		3
Additional Humanity & Fine Arts course for A&S or Minor/2nd Major course**		3
Elective***		3
*Humanities/Fine Arts must be in a 2nd discipline.		
**A&S College Requirement Option. HFA for A&S must be in a 3rd discipline.		
***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 can help you reach these minimums.		
	Credits	**12**
Spring		
GEOL 4800 or GEOL 4950	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE (*,**) or SENIOR THESIS	3
GEOL 4260	PROCESS GEOMORPHOLOGY (if not taken previous spring) or elective/ minor/2nd major course)	4
ENGL 3980	TECHNICAL WRITING ACROSS THE DISCIPLINES (OR Upper Level Elective***)	3
Minor or Elective course^		3
*GEOL 4800: Requires Senior status, major or area of concentration in geography or environmental science AND permission.		
**GEOL 4950: Requires Senior status		
***Note: If students take GEOL 4950, the Writing in the Discipline requirement will be fulfilled. If students select GEOL 4800, they must take a separate WID course, such as ENGL 3980. ENGL 3980 or other approved WID courses require ENGL 1160.		
^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 can help you reach these minimums.		
	Credits	**13**
	Total Credits	**120-123**

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