

GEOLOGY, BACHELOR OF ARTS

To obtain a B.A. with a major in Geology, a student must fulfill university, college, and departmental requirements. Minimum hour requirements follow:

- 46 hours of University General Education courses - *(Most commonly, Geology majors do not complete 46 hours of coursework solely for the purpose of meeting University General Education requirements. Instead, they often test out of at least six hours of fundamental academic skills, take courses that meet both the three hours of U.S. Diversity requirements and three hours of social sciences requirements, meet five hours of humanities and 3 hours of global diversity requirements with a language course, and meet the seven-hour natural sciences distribution requirement through completing major courses. In such cases, the number of credit hours taken solely to meet General Education requirements is reduced to 22 or fewer.)*
- 12 hours of college breadth requirement
- 16 hours of foreign language
- 70 hours of major courses

TOTAL HOURS: 120

Requirements

Geology is offered as a Bachelor of Arts or a Bachelor of Science degree. Students may choose one of two tracks to follow: a general Geology Track and a Geology Career Track. Requirements for each are below.

The required core courses for either the B.A. or B.S. degree in geology are:

Code	Title	Credits
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY	4
GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY	4
GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING	3
GEOL 2750	MINERALOGY	3
GEOL 2754	MINERALOGY LABORATORY	1
GEOL 3300	STRUCTURAL GEOLOGY	3
GEOL 3310	STRUCTURAL GEOLOGY FIELD METHODS	1
GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY	3
GEOL 4620	ADVANCED FIELD COURSE	6

Students must choose one of the tracks below.

For a B.A., the college requires completion of a foreign language through the intermediate level.

General Geology Track

In addition to the core geology requirements, students wishing to follow the general geology track must also take one of the following:

Code	Title	Credits
GEOL 4260	PROCESS GEOMORPHOLOGY	4
GEOL/GEOG 4640	CRITICAL ZONE SCIENCE	4
GEOL/GEOG 4330	SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION	4

In addition, students in the General geology track must take one of the following:

GEOL 4800	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE	3
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GEOL 4950	SENIOR THESIS	3
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In addition, the major must select at least 12 hours of geology or geography courses that should be chosen after consultation with an adviser.

Required cognate courses are:

An approved statistics course		3
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CHEM 1140	FUNDAMENTALS OF COLLEGE CHEMISTRY	4
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CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY	1
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PHYS 1110	GENERAL PHYSICS I	4
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PHYS 1154	GENERAL PHYSICS LABORATORY I	1
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Select one of the following options:

Option 1:

PHYS 1120	GENERAL PHYSICS II	4
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PHYS 1164	GENERAL PHYSICS LABORATORY II	1
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Option 2:

GEOL 4400	GEOPHYSICS	3
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Geology Career Track

In addition to the core geology requirements, students wishing to follow the Geology career track must also take one of the following:

Code	Title	Credits
GEOL 4260	PROCESS GEOMORPHOLOGY	4
GEOL/GEOG 4640	CRITICAL ZONE SCIENCE	4
GEOL/GEOG 4330	SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION	4

Additionally, students in the Geology career track must take one of the following:

GEOL 4800	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE	3
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GEOL 4950	SENIOR THESIS	3
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Students must also take additional Geology/Geography/related-field courses, which add up to at least 12 credits, and should be chosen after consultation with an advisor.

Required cognate courses:

Chemistry

CHEM 1180	GENERAL CHEMISTRY I	3
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CHEM 1184	GENERAL CHEMISTRY I LABORATORY	1
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Select one of the following options:

Option 1:

CHEM 1190	GENERAL CHEMISTRY II	3
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CHEM 1194	GENERAL CHEMISTRY II LABORATORY	1
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Option 2:

GEOL 4540	GEOCHEMISTRY	3
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Math

Select one of the following options:

Option 1:

MATH 1950	CALCULUS I	5
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MATH 1960	CALCULUS II	4
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Option 2:

MATH 1930	CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES	3
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Physics

PHYS 2110	GENERAL PHYSICS I - CALCULUS LEVEL	4
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PHYS 1154	GENERAL PHYSICS LABORATORY I	1
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Select one of the following options:

Option 1:

PHYS 2120	GENERAL PHYSICS-CALCULUS LEVEL	4
PHYS 1164	GENERAL PHYSICS LABORATORY II	1

Option 2:

GEOL 4400	GEOPHYSICS	3
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Career Geology Track**Freshman****Fall**

		Credits
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY	4
MATH 1930	CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES (*)	3
ENGL 1160	ENGLISH COMPOSITION II (**)	3
Foreign Language 1110-level***		5

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

***Foreign Language 1110 is a humanity and global diversity

Credits **15**

Spring

GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY (*)	4
CHEM 1180 & CHEM 1184	GENERAL CHEMISTRY I and GENERAL CHEMISTRY I LABORATORY (**)	4
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
Foreign Language 1120 – level		5

*GEOL 1180: Requires GEOL 1170 (Consult your advisor prior to registration for this course.)

**CHEM 1180: Please see the catalog for the most up-to-date prerequisites. Must take CHEM 1184 concurrently.

Credits **16**

Sophomore**Fall**

GEOL 2750 & GEOL 2754	MINERALOGY and MINERALOGY LABORATORY (*)	4
GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING (**)	3
Humanities and Fine Arts		3
Foreign Language 2110-level		3

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

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

Credits **13**

Spring

Approved GEOL Elective		4
PHYS 2110 & PHYS 1154	GENERAL PHYSICS I - CALCULUS LEVEL and GENERAL PHYSICS LABORATORY I (*)	5
CHEM 1190 & CHEM 1194 or GEOL 4540	GENERAL CHEMISTRY II (with lab**) or GEOCHEMISTRY	3-4
Foreign Language 2120-level		3

*PHYS 2110: Requires MATH 1930 for Geology majors (MATH 1950 for non-GEOL majors), or Math ACT sub-score of 25, or appropriate Math Placement Exam score.

**CHEM 1190: Please see the catalog for the most up-to-date prerequisites.

Credits **15-16**

Junior**Fall**

GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY (*)	3
Approved GEOL elective**,***		4
PHYS 2120 & PHYS 1164 or GEOL 4400	GENERAL PHYSICS-CALCULUS LEVEL (with lab^) or GEOPHYSICS	3-5
Social Science/US Diversity		3

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

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

***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.

^PHYS 2120: Requires PHYS 2110 and MATH 1930 for GEOL majors or MATH 1960 for non-GEOL majors.

Credits **13-15**

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

Humanities and Fine Arts^ 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 GEOG 1030 or GEOG 1050 or GEOL 1010 or GEOL 1170

^Humanities/Fine Arts #3 must be in a 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**

Approved GEOL elective		1
Humanities and Fine Arts for A&S or Minor/2nd Major course*		3

Social Science**	3
Social Science for A&S or Minor/2nd Major course***	3
HIST 1010 or Minor/2nd Major Course^	3

*A&S College Requirement Option. HFA for A&S must be from 3rd discipline.

**Social Science for University Gen Ed must be from a 2nd discipline

***A&S College Requirement Option. Social Science for A&S must be from a 3rd discipline

^A&S College Requirement Option.

- 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	13
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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 Upper Level Elective***) 3
Approved GEOL Elective	3
Upper Level Elective	3
HIST 1000 or Minor/2nd Major Course^	3

*GEOL 4800: Requires Senior status, major or area of concentration in geography or environmental science AND permission. If GEOL 4800 is taken, an advanced writing course such as ENGL 3980 must also be taken.

**GEOL 4950: Requires Senior status. If GEOL 4950 is taken, taking an advanced writing course such as ENGL 3980 will not be needed for the writing requirement but could still be helpful toward overall upper level requirements.

***ENGL 3980: Requires ENGL 1160 with grade of C- or better or appropriate placement via AP or EPPE. ENGL 3980 specifically will not be needed if taking GEOL 4950.

^CAS College Requirement Option.

Credits	15
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Total Credits	120-123
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General Geology Track

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 1160	ENGLISH COMPOSITION II (**)	3
Foreign Language 1110-level***		5

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

**ENGL 1160: Requires ENGL 1150, or EPPE or AP placement.

***Foreign Language 1110 is a humanity/fine arts course and global diversity

Credits	15-16
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Spring	
GEOL 1180	INTRODUCTION TO HISTORICAL GEOLOGY (*) 4

CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (**)	5
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Foreign Language 1120-level	5
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*GEOL 1180: Requires GEOL 1170 (Consult your advisor before enrolling for this course)

**CHEM 1140: See the catalog for the most up-to-date prerequisites. CHEM 1144 must be taken concurrently.

Credits	14
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Sophomore

Fall		
GEOL 2750 & GEOL 2754	MINERALOGY and MINERALOGY LABORATORY (*)	4
Social Science/US Diversity		3

CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
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Foreign Language 2110-level	3
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GEOL 2300	GEOSCIENCE DATA ANALYSIS AND MODELING (**)	3
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*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.

Credits	16
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Spring

Approved GEOL Elective	4
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Foreign Language 2110-level	3
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PHYS 1110 & PHYS 1154	GENERAL PHYSICS I and GENERAL PHYSICS LABORATORY I (*)	5
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*PHYS 1110: Requires MATH 1220 (or MATH 1300 or higher), or Math ACT sub-score of 23, or appropriate Math Placement Exam score.

Credits	12
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Junior

Fall		
GEOL 3400	INTRODUCTION TO SEDIMENTARY GEOLOGY (*)	3

Approved GEOL Elective**	3
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PHYS 1120 & PHYS 1164 or GEOL 4400	GENERAL PHYSICS II (with lab***) or GEOPHYSICS	3-5
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Humanities and Fine Arts	3
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Social Science	3
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*GEOL 3400: Requires GEOL 2750 and 2754

**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.

***PHYS 1120: Requires PHYS 1110

Credits	15-17
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Spring

GEOL 3300 & GEOL 3310	STRUCTURAL GEOLOGY and STRUCTURAL GEOLOGY FIELD METHODS (*)	4
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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
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GEOL elective***	2-3
Social Science^	3
HIST 1010 or Minor/2nd Major 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 GEOG 1030 or GEOG 1050 or GEOL 1010 or GEOL 1170

***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.

^ Social Science must be in a 2nd discipline.

#CAS College Requirement Option.

Credits 16-17

Summer

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

Humanities and Fine Arts*	3
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Additional Humanity/Fine Arts for A&S or Minor/2nd Major course**	3
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Statistics course	3
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HIST 1000 or Minor/2nd Major Course***	3
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Additional Social Science for A&S or Minor/2nd Major course^	3
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*Humanities/Fine Arts must be in a 2nd discipline.

**A&S College Requirement Option. Additional HFA must be from a 3rd discipline.

***A&S College Requirement Option.

^A&S College Requirement Option. Additional SS must come from 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

Spring

GEOL 4260	PROCESS GEOMORPHOLOGY (*)	4
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GEOL 4800 or GEOL 4950	INTERNSHIP IN ENVIRONMENTAL/ REGIONAL PLANNING/EARTH SCIENCE (**) or SENIOR THESIS	3
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ENGL 3980	TECHNICAL WRITING ACROSS THE DISCIPLINES (OR Upper Level Elective***)	3
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Approved GEOL elective	3
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*GEOL 4260: Requires GEOL 1170; GEOL 1180; GEOL 2750; GEOL 2760; GEOL 3300

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

**GEOL 4950: Requires Senior status.

***ENGL 3980: Requires ENGL 1160 with grade of C- or better or appropriate placement via EPPE or AP.

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.

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 13

Total Credits 122-126

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