

# Applied Geology B.S.

Department of Earth & Atmospheric Sciences, 303-615-1177, Science Room 2028  
College of Letters, Arts, and Sciences

Catalog  
2018-2019

This sheet applies to the 2018-19 catalog *only*. It does not replace the full catalog as an official statement of requirements. Students with declared majors *must* work with an advisor on course selection and sequencing to ensure a timely graduation.

General Studies	33 min
Required Pre-Requisites	20
Major courses	60
Unrestrictive Electives	<u>7</u>
Total to graduate (min. 40 hrs. upper-division)	120 min

## General Studies Course Requirements

### Written Communication (min. 6 credits)

- \_\_\_ ENG 1010 Composing Arguments
- \_\_\_ ENG 1020 Freshman Comp: Analysis, Research, & Doc.

### Oral Communication (min. 3 credits)

### Quantitative Literacy

See Required Pre-requisites for recommendations\*

### Arts and Humanities (min. 6 credits)

### Historical (min. 3 credits)

### Natural and Physical Sciences (min. 6 credits)

See Required Pre-requisites for recommendations\*

### Social and Behavioral Sciences I (min. 3 credits)

### Social and Behavioral Sciences II (min. 3 credits)

### Global Diversity

\_\_\_ may be satisfied within General Studies (GD code)

### Multicultural Requirement

\_\_\_ may be satisfied within General Studies (MC code)

## Applied Geology Required Pre-Requisites\*

	<u>Credits</u>
___ MTH 1110 College Algebra for Calculus	4
___ MTH 1120 College Trigonometry (Preq. MTH 1110)	3
___ MTH 1210 Introduction to Statistics	4
___ PHY 2010 College Physics I (Preq. MTH 1120)	4
___ CHE 1800 General Chemistry I (Preq. MTH 1110)	4
___ CHE 1801 General Chemistry Lab I (Co-Req. CHE 1800)	1

## Applied Geology Major Required Core Courses

	<u>Credits</u>
___ GEL 1010 Physical Geology	4
___ GEL 1030 Historical Geology (Preq. GEL 1010)	4
___ GEL 3050 Intro to Mineralogy and Optical Mineralogy (Preq. GEL 1010 & CHE 1800)	4
___ GEL 3120 Geomorphology (Preq. GEL 1010 or GEG 1100)	4
___ GEL 2530 Introduction to Field Methods (Preq. GEL 1010 & GIS 1220)	2
___ GEL 3530 Adv. Geology of the Colorado Plateau (Preq. GEL 1010, additional 4 credits of GEL)	2
___ GEL 4450 Sedimentary Geology and Stratigraphy (Preq. GEL 1030, GEL 3050, MTH 1120 or MTH 1400)	4
___ GEL 4460 Structural Geology and Mapping (Preq. GEL 4450)	4
___ GIS 1220 Introduction to Geospatial Sciences (MTH 1110 Recommended)	3
___ GIS 2250 Geographic Information Systems (Preq. GIS 1220)	3
___ GEL 4950 Internship in Geology (min. 3 credits) (Preq. Permission of EAS Dept.)	3

## Senior Experience Requirement (min. 4 credits)

	<u>Credits</u>
___ GEL 4970 Undergraduate Research in Geology (Preq. MTH 1210, GEL 3050, Sr. Status)	4

**Complete year of CHE or PHY series (min. 5 credits)**

___ CHE 1810 General Chemistry II ( <i>Preq. CHE 1800</i> )	4
___ CHE 1811 General Chemistry II Laboratory ( <i>Co-Req. CHE 1810</i> )	1
___ PHY 2030 College Physics I Laboratory ( <i>Preq. MTH 1120</i> )	1
___ PHY 2020 College Physics II ( <i>Preq. PHY 2010</i> )	4
___ PHY 2040 College Physics II Laboratory ( <i>Preq. PHY 2030</i> )	1

**Applied Geology Elective Courses****(min. 11 credits must be with the GEL prefix )**

___ GEL 1020 Geology of Colorado	3
___ GEL 3420 Soil Resources ( <i>Preq. ENV 1200</i> )	4
___ GEL 3440 Energy and Mineral Resources ( <i>Preq. 3050</i> )	4
___ GEL 3510 Adv. Geology of Red Rocks Park and Vicinity ( <i>Preq. 9 credits GEL coursework</i> )	1
___ GEL 3520 Adv. Garden of the Gods – Front Range ( <i>Preq. 9 credits GEL coursework</i> )	2
___ GEL 3550 Adv. Geology of the Great Sand Dunes ( <i>Preq. 9 credits GEL coursework</i> )	2
___ GEL 3920 Directed Study in Geology ( <i>Preq. Permission of EAS Dept.</i> )	2-6
___ GEL 4050 Igneous and Metamorphic Petrology ( <i>Preq. GEL 3050</i> )	4
___ GEL 4150 Hydrology ( <i>Preq. GEG 1100 or GEG 1910 or ENV 3400</i> )	4
___ GEL 4250 Hydrogeology ( <i>Preq. GEL 1010, GEL 3420, CHE 1800, &amp; MTH 1110</i> )	4

**Credits****Additional Major Electives (min. 3 credits)**

___ ENV 3540 Adv. Geologic and Env. Hazards – Denver ( <i>Preq. 9 credits GEG or GEL</i> )	2
___ ENV 3700 Mountain Environments ( <i>Preq. ENV 1200, 9 credits ENV, GEL, GEG, BIO, CHE or MTR &amp; Jr. Status</i> )	3
___ ENV 4000 Environmental Geology ( <i>Preq. GEL 1010, GEL 3120 &amp; GEL 3420</i> )	3
___ ENV 4010 Environmental Hazards and GIS ( <i>Preq. ENV 4000 &amp; GEG 3610 recommended</i> )	3
___ GIS 3250 Cartography ( <i>Preq. GIS 2250 &amp; MTH 1210</i> )	3
___ GIS 4840 Remote Sensing ( <i>Preq. GIS 2250 &amp; MTH 1110</i> )	3
___ GIS 4860 GIS Applications ( <i>Preq. GIS 2250; Pre or Co: GIS 3250</i> )	4
___ CET 3320 Environmental Impact Statements ( <i>Preq. Jr. Status</i> )	3

**Credits****Unrestricted Electives**

Need to total a minimum of 120 credits for a bachelor's degree

Students must complete each course with a grade of "C-" or better.

The degree is an extended major that does not require a minor.