# GEOLOGY, BACHELOR OF SCIENCE

## 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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GEOL 1170</td>
<td>INTRODUCTION TO PHYSICAL GEOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 1180</td>
<td>INTRODUCTION TO HISTORICAL GEOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 2300</td>
<td>GEOSCIENCE DATA ANALYSIS AND MODELING</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 2750</td>
<td>MINERALOGY</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 2754</td>
<td>MINERALOGY LABORATORY</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 3300</td>
<td>STRUCTURAL GEOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 3310</td>
<td>STRUCTURAL GEOLOGY FIELD METHODS</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 3400</td>
<td>INTRODUCTION TO SEDIMENTARY GEOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 4620</td>
<td>ADVANCED FIELD COURSE</td>
<td>6</td>
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</table>

Students must choose one of the tracks below.

### 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:

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<tr>
<td>GEOL 4260</td>
<td>PROCESS GEOMORPHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>GEOL/GEOG 4640</td>
<td>CRITICAL ZONE SCIENCE</td>
<td>4</td>
</tr>
<tr>
<td>GEOL/GEOG 4330</td>
<td>SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION</td>
<td>4</td>
</tr>
</tbody>
</table>

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

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<tr>
<td>GEOL 4800</td>
<td>INTERNSHIP IN ENVIRONMENTAL/REGIONAL PLANNING/Earth SCIENCE</td>
<td>1-6</td>
</tr>
<tr>
<td>GEOL 4950</td>
<td>SENIOR THESIS</td>
<td>3</td>
</tr>
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</table>

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:

- An approved statistics course
- CHEM 1140 FUNDAMENTALS OF COLLEGE CHEMISTRY 4
- CHEM 1144 FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY 1
- PHYS 1110 GENERAL PHYSICS I WITH ALGEBRA 4
- PHYS 1154 GENERAL PHYSICS LABORATORY I 1

Select one of the following options:

#### Option 1:
- PHYS 1200 GENERAL PHYSICS 4
- PHYS 1164 GENERAL PHYSICS LABORATORY II 1

#### Option 2:
- GEOL 4400 GEOPHYSICS 3

### Math

Select one of the following options:

#### Option 1:
- MATH 1950 CALCULUS I 5
- MATH 1960 CALCULUS II 5

#### Option 2:
- MATH 1930 CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES 3

### Physics

Select one of the following options:

#### Option 1:
- PHYS 2110 GENERAL PHYSICS I - CALCULUS LEVEL 4
- PHYS 1154 GENERAL PHYSICS LABORATORY I 1

#### Option 2:
- PHYS 2120 GENERAL PHYSICS-CALCULUS LEVEL 4
- PHYS 1164 GENERAL PHYSICS LABORATORY II 1

### 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:

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</tr>
<tr>
<td>GEOL 4950</td>
<td>SENIOR THESIS</td>
<td>3</td>
</tr>
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</table>

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
  - CHEM 1184 GENERAL CHEMISTRY I LABORATORY 1

Select one of the following options:

#### Option 1:
- CHEM 1190 GENERAL CHEMISTRY II 3
- CHEM 1194 GENERAL CHEMISTRY II LABORATORY 1

#### Option 2:
- GEOL 4540 GEOCHEMISTRY 3

- Math
  - MATH 1950 CALCULUS I 5
  - MATH 1960 CALCULUS II 5

Select one of the following options:

#### Option 1:
- MATH 1930 CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES 3

- Physics
  - PHYS 2110 GENERAL PHYSICS I - CALCULUS LEVEL 4
  - PHYS 1154 GENERAL PHYSICS LABORATORY I 1

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