**GEOLOGY BS**

**More Information**

**Advising Requirement**
Advising is mandatory for this program. Consult your department advisor or program coordinator for information.

**E-advising Tools**
Students are encouraged to use the interactive e-advising tools that have been designed to help them graduate within four years. These tools can be accessed through the Student Center.

Geology (https://www.csuchico.edu/erth/programs/undergraduate-degrees.shtml/) looks at some of the most important issues in society today, and there’s no better time to be a geology major than right now! Concerns involving water resources, energy, mineral resources, environmental cleanup all have their foundations in geology.

With the Bachelor of Science in Geology, those seeking employment have many opportunities with government agencies, private consulting firms, and other non-government organizations. The program also prepares students for graduate studies in a wide variety of fields.

The program is highly structured to give you fundamental skills and knowledge in how rocks are formed (petrology, mineralogy, and volcanology), how they can be deformed (structural geology), and how we can use rocks to inform us about deep geologic time (paleontology and sedimentary geology) to form basins and valuable natural resources (economic geology). Courses focus on applied problems that prepare students for field and laboratory work in the professional world to help solve some of the most pressing environmental issues of our time.

**Grading Requirement**
All courses taken to fulfill program course requirements must be taken for a letter grade except those courses specified by the department as credit/no credit grading only.

**Course Requirements for the Major: 64-65 units**
Completion of the following courses, or their approved transfer equivalents, is required of all candidates for this degree. Courses in this program may complete more than one graduation requirement.

### Course Requirements for the Major: 64-65 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>ERTH 102</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 203</td>
<td>Principles of Historical Geology</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 265</td>
<td>Soils and Surficial Processes</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>MATH 109</td>
<td>Survey of Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 120</td>
<td>Analytic Geometry and Calculus</td>
<td></td>
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<tr>
<td>Select one of the following:</td>
<td></td>
<td>4</td>
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<tr>
<td>PHYS 202A</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 204A</td>
<td>Physics for Students of Science and Engineering:Mechanics</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
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<td>3-4</td>
</tr>
</tbody>
</table>

**Select three of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERTH 303</td>
<td>Invertebrate Paleontology</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 306</td>
<td>Mineralogy and Lithology</td>
<td>4</td>
</tr>
<tr>
<td>ERTH 307</td>
<td>Stratigraphy</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 360</td>
<td>Field Methods</td>
<td>2</td>
</tr>
<tr>
<td>ERTH 370W</td>
<td>Energy in the Human Environment (W)</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 403</td>
<td>Igneous and Metamorphic Petrology</td>
<td>4</td>
</tr>
<tr>
<td>ERTH 408</td>
<td>Structural Geology</td>
<td>4</td>
</tr>
<tr>
<td>ERTH 455</td>
<td>Sedimentary Basin Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 471</td>
<td>Field Geology</td>
<td>2</td>
</tr>
<tr>
<td>ERTH 572W</td>
<td>Advanced Field Geology (W)</td>
<td>3</td>
</tr>
</tbody>
</table>

1 Students who are considering attending graduate school should talk with an advisor about additional preparatory courses in chemistry, mathematics, and physics. The department very strongly recommends CHEM 111, CHEM 112, MATH 120, MATH 121; either PHYS 202A and PHYS 202B or PHYS 204A, PHYS 204B, and PHYS 204C.

**Electives Requirement**

To complete the total units required for the bachelor’s degree, select additional elective courses from the total University offerings. You should consult with an advisor regarding the selection of courses which will provide breadth to your University experience and possibly apply to a supportive second major or minor.

**Honors in the Major**

Honors in the Major is a program of independent work in your major. It requires 6 units of honors course work completed over two semesters.

The Honors in the Major program allows you to work closely with a faculty mentor in your area of interest on an original performance or research project. This year-long collaboration allows you to work in your field at a professional level and culminates in a public presentation of your work. Students sometimes take their projects beyond the University for submission in professional journals, presentation at conferences, or academic competition. Such experience is valuable for graduate school and professional life. Your honors work will be recognized at your graduation, on your permanent transcripts, and on your diploma. It is
often accompanied by letters of commendation from your mentor in the
department or the department chair.

Some common features of Honors in the Major program are:

• You must take 6 units of Honors in the Major course work. All 6 units
  are honors classes (marked by a suffix of H), and at least 3 of these
  units are independent study (399H, 499H, 599H) as specified by your
department. You must complete each class with a minimum grade of
  B.

• You must have completed 9 units of upper-division course work or 21
  overall units in your major before you can be admitted to Honors in
  the Major. Check the requirements for your major carefully, as there
  may be specific courses that must be included in these units.

• Your cumulative GPA should be at least 3.5 or within the top 5% of
  majors in your department.

• Your GPA in your major should be at least 3.5 or within the top 5% of
  majors in your department.

• Most students apply for or are invited to participate in Honors in
  the Major during the second semester of their junior year. Then they
  complete the 6 units of course work over the two semesters of their
  senior year.

• Your honors work culminates with a public presentation of your
  honors project.

While Honors in the Major is part of the Honors Program, each
department administers its own program. Please contact your major
department or major advisor to apply.

See Bachelor’s Degree Requirements (https://catalog.csuchico.edu/
undergraduate-requirements/bachelors-degree-requirements/) for
complete details on general degree requirements. A minimum of 39 units,
including those required for the major, must be upper division.

General Education Requirements: 48 units

See General Education (https://catalog.csuchico.edu/colleges-
departments/undergraduate-education/general-education/) and
the Class Schedule (http://www.csuchico.edu/schedule/) for the most
current information on General Education Requirements and course
offerings.

This major has approved GE modification(s). See below for information
on how to apply these modification(s).

• ERTH 572W is an approved major course substitution for Upper
  Division Scientific Inquiry and Quantitative Reasoning (UD-B).

Diversity Course Requirements: 6 units

You must complete a minimum of two courses that focus primarily on
cultural diversity. At least one course must be in U.S. Diversity (USD)
and at least one in Global Cultures (GC). See Diversity Requirements
(https://catalog.csuchico.edu/undergraduate-requirements/diversity-
requirements/) for a full list of courses. Most courses taken to satisfy
these requirements may also apply to General Education (https://
catalog.csuchico.edu/colleges-departments/undergraduate-education/
general-education/).

Upper-Division Writing Requirement

Writing Across the Curriculum (EM 17-009 (http://www.csuchico.edu/
prs/EMs/2017/17-009.shtml/)) is a graduation requirement and may
be demonstrated through satisfactory completion of four Writing
(W) courses, two of which are designated by the major department.
See Mathematics/Quantitative Reasoning and Writing Requirements
(https://catalog.csuchico.edu/undergraduate-requirements/
mathematics-quantitative-reasoning-writing-requirements/) for more
details on the four courses. The first of the major designated Writing (W)
courses is listed below.

• ERTH 370W Energy in the Human Environment (W)

The second major-designated Writing course is the Graduation Writing
Assessment Requirement (GW) (EO 665 (https://calstate.policystat.com/
policy/9585618/latest/)). Students must earn a C- or higher to
receive GW credit. The GE Written Communication (A2) (https://
catalog.csuchico.edu/colleges-departments/undergraduate-education/
general-education/#A2) requirement must be completed before a student
is permitted to register for a GW course.