BACHELOR OF ARTS IN EARTH SCIENCES – GEOL ASSOCIATE DEGREE FOR TRANSFER ROADMAP

This is a sample pathway for students who transfer to San Francisco State University in the current Bulletin year with an AS-T in Geology. Sixteen units in the major (CHEM 115, MATH 226, ERTH 210, and three additional lower-division units in chemistry or calculus) and all lower-division GE requirements have been satisfied. Check with a major advisor about the most appropriate course sequence. Degree completion guaranteed in 60 units; see the Associate Degree for Transfer (ADT) section for more information (http://bulletin.sfsu.edu/undergraduate-admissions/transfer-students).

Course Titles and Units

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>ERTH 205</td>
<td>Techniques in Earth Sciences</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>ERTH 400</td>
<td>Earth Systems I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHYS 111</td>
<td>General Physics I</td>
<td>4</td>
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<tr>
<td></td>
<td>or PHYS 112 and PHYS 220</td>
<td>or General Physics with Calculus I and General Physics with Calculus I Laboratory</td>
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<tr>
<td></td>
<td>GE Area A: Written English Communication II (A4)</td>
<td>or University Elective if A4 met in transfer</td>
<td>3</td>
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<tr>
<td></td>
<td>US History (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#USHaGR)</td>
<td>or University Elective if US History met before transfer</td>
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</tr>
<tr>
<td></td>
<td>Units</td>
<td></td>
<td>15</td>
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<tr>
<td>Second Semester</td>
<td>ERTH 500</td>
<td>Earth Systems II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ERTH 600GW</td>
<td>Earth's Climate History - GWAR</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Earth Sciences Elective – See List ¹</td>
<td>or University Elective if US/CA Government met before transfer</td>
<td>3</td>
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<tr>
<td></td>
<td>U.S. and California Government (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#usg)</td>
<td>or University Elective if US/CA Government met before transfer</td>
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<tr>
<td></td>
<td>University Elective</td>
<td></td>
<td>3</td>
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<tr>
<td></td>
<td>Units</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>BIOL 652</td>
<td>Science Education Partners in Biology</td>
<td>4</td>
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<tr>
<td></td>
<td>or Earth Sciences Elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Earth Sciences Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper Division GE: UD-C or UD-D</td>
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<td></td>
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<tr>
<td></td>
<td>University Electives</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Units</td>
<td>15</td>
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Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERTH 690 &amp; ERTH 695</td>
<td>Earth Sciences Capstone Presentation and Senior Project</td>
<td>2-4</td>
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<tr>
<td>Earth Sciences Electives</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Upper Division GE: UD-C or UD-D</td>
<td></td>
<td>3</td>
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<tr>
<td>University Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Units</td>
<td>15</td>
<td></td>
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</tbody>
</table>

¹ Earth Sciences Elective – these ERTH courses also satisfy UD-B. If other ERTH course selected, replace University elective with UD-B course.

To Do at SF State:

Enough total units to reach 120 minimum for graduation; 40 units minimum at the upper division level; to include the following:

University-Wide Requirements: 9–18 Units

- ENG 214 or equivalent A4 course (0–3 units) if not taken before transfer
- American Institutions (0–6 units): US History, US Government, California State and Local Government requirements if not taken before transfer
- Upper division GE, areas B, C and D (9 units): One ERTH elective course may double-count for UD-B. See notes.
- Students entering this major with the AS-T in Geology are not required to fulfill SF State Studies requirements.
- B.A. Earth Sciences students satisfy the Complementary Studies requirement by completion of the Basic Science and Math Foundation.

Earth Sciences Major: 34 Units

- Basic Science and Math Foundation (4 units): PHYS 111/PHYS 112 or PHYS 220/PHYS 222. If PHYS completed before transfer, consult with major advisor about appropriate course choices. (Units from the ADT applied for CHEM 115 and MATH 226, plus three additional units in CHEM or CALC.)
- Earth Sciences Foundation (11 units)
- Earth Sciences Electives (15 units): Must be upper division courses organized around a coherent theme approved by an advisor. (Four units for ERTH 210 from ADT applied here.)
- Cumulating experience (4 units): Students may choose from BIOL 652 OR ERTH 690 and ERTH 695

University Electives: Eight or More Units

Depends on course choices made at the community college, how transferred units are applied to the requirements above, and course choices at SF State. Some courses may meet more than one requirement, e.g. both in UD GE and the major.

Earth Sciences Elective

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ERTH 310</td>
<td>The Violent Earth</td>
<td>3</td>
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<tr>
<td>ERTH 325</td>
<td>Geology of the National Parks</td>
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</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Units</td>
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<tr>
<td>ERTH 330</td>
<td>California Water</td>
<td>3</td>
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<td>ERTH 335</td>
<td>Global Warming</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 360</td>
<td>California Weather Events</td>
<td>3</td>
</tr>
<tr>
<td>ERTH 365</td>
<td>Extreme Weather in a Warming World</td>
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</table>