Bachelor of Science in Earth and Environmental Systems, Environmental Systems Track

Required Core Courses

The Required General Courses provide a solid background in Geosciences and other subjects. Environmental Systems include physical, biological and human systems; thus, the program incorporates coursework in Biological Sciences, Physical and Social Sciences, and Mathematics. Some of these courses may satisfy General Education requirements.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1107</td>
<td>Real Monsters</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 2204</td>
<td>Fluid Earth</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 2205</td>
<td>Solid Earth</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 2292</td>
<td>Geosciences Careers Seminar</td>
<td>1</td>
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<tr>
<td>GEOL 3315</td>
<td>Evolution of the Earth's Surface</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 4403</td>
<td>Principles of Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 4492</td>
<td>Earth and Environmental Systems Seminar</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1101 &amp; 1101L</td>
<td>Biology I and Biology I Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1102 &amp; 1102L</td>
<td>Biology II and Biology II Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2209 &amp; 2209L</td>
<td>General Ecology and General Ecology Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1111 &amp; 1111L</td>
<td>General Chemistry I and General Chemistry I Lab</td>
<td>5</td>
</tr>
<tr>
<td>MATH 1147</td>
<td>College Algebra and Trigonometry (B.A.)</td>
<td>5</td>
</tr>
<tr>
<td>or MATH 1143 &amp; MATH 1144</td>
<td>College Algebra and Trigonometry</td>
<td></td>
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</tbody>
</table>

Recommended:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 3307</td>
<td>Professional and Technical Writing</td>
<td>3</td>
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</tbody>
</table>

1 Transfer students may substitute other courses for GEOL 1107 with the permission of the Geosciences Department Chair or Geosciences Undergraduate Advisor.

BS Environmental Systems Track Requirements

This track combines courses in Ecology, Environmental Geosciences, and supporting fields. This emphasis track will train students interested in field-related careers who need to understand the environmental relations between geologic and living systems.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>GEOL 4402 &amp; 4402L</td>
<td>Geomorphology and Geomorphology Lab</td>
<td></td>
</tr>
<tr>
<td>GEOL 4417 &amp; 4417L</td>
<td>Introduction to Soils and Critical Zone Processes and Introduction to Soils and Critical Zone Processes Lab</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 4429 &amp; 4429L</td>
<td>Watershed Hydrology and Watershed Hydrology Laboratory</td>
<td></td>
</tr>
<tr>
<td>GEOL 4430</td>
<td>Principles of Hydrogeology</td>
<td>3</td>
</tr>
</tbody>
</table>

Other or approved courses in related fields.

Select one course from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4462 &amp; 4462L</td>
<td>Freshwater Ecology and Freshwater Ecology Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 4489</td>
<td>Field Ecology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 4490</td>
<td>Ecosystem Ecology and Global Changes</td>
<td>4</td>
</tr>
</tbody>
</table>

Other or approved course in related fields.

Required Courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1112 &amp; 1112L</td>
<td>General Chemistry II and General Chemistry II Lab</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 4451</td>
<td>Field Methods in Environmental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1160 or MATH 1170</td>
<td>Survey of Calculus or Calculus I</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 3350</td>
<td>Statistical Methods</td>
<td>3</td>
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Select one elective from the following:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>GEOL 4410</td>
<td>Science in American Society</td>
<td>2</td>
</tr>
<tr>
<td>GEOL/HIST 4471</td>
<td>Historical Geography of Idaho</td>
<td>3</td>
</tr>
<tr>
<td>GLBL 3379</td>
<td>Environment and Geography</td>
<td>3</td>
</tr>
<tr>
<td>GLBL 4466</td>
<td>Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GLBL 4480</td>
<td>International Parks and Protected Areas</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4430</td>
<td>Global Environmental History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4432</td>
<td>U.S. Environmental History</td>
<td>3</td>
</tr>
<tr>
<td>POLS 4455</td>
<td>Environmental Politics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 4455</td>
<td>Environmental Ethics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 3335</td>
<td>Environmental Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

Other or approved course in related fields.

Students who are considering graduate studies in a Geosciences field should consider also taking BIOL 3316 Biometry Laboratory, PHYS 1111 General Physics I with PHYS 1113 General Physics I Laboratory or PHYS 1111 General Physics I with PHYS 2213 Engineering Physics I Laboratory.