BS in Geological Sciences

Degree Program Description
A Bachelor of Science degree in Geological Sciences provides students with the quantitative and conceptual skills they need to succeed in graduate work and a career as a professional geologist in industry, government or academia. The curriculum provides flexibility for students who seek to focus on a specific subdiscipline in the geosciences. Students interested in geophysics, for example, should use their electives to expand their background in math and to develop a broad knowledge of geology and geophysics. Other subdisciplines include geochemistry, paleobiology and hydrogeology. The capstone class is an award-winning 6-week summer Field Camp based in Lander, Wyoming. Many students participate in research projects with faculty members, usually involving fieldwork, and leading to a senior thesis. Their results are typically presented at a national meeting and in an oral defense in the department. Study abroad classes are typically offered every two to three years - recently to China, Chile, and Spain. Some BS graduates pursue careers in environmental consulting. Many others go into the oil and gas industry, which typically requires an MS degree.

Major Program Requirements
Majoring in geological sciences and earning a Bachelor of Science degree prepares the student for graduate work and a career as a professional geologist in industry, research or academia. The curriculum provides flexibility for students who seek to focus on a specific subdiscipline in the geosciences. Students interested in geophysics, for example, should use their electives to expand their background in math and to develop a broad knowledge of geology and geophysics. Other subdisciplines include geochemistry, paleobiology and hydrogeology. The capstone class is an award-winning 6-week summer Field Camp based in Lander, Wyoming. Many students participate in research projects with faculty members, usually involving fieldwork, and leading to a senior thesis. Their results are typically presented at a national meeting and in an oral defense in the department. Study abroad classes are typically offered every two to three years - recently to China, Chile, and Spain. Some BS graduates pursue careers in environmental consulting. Many others go into the oil and gas industry, which typically requires an MS degree.

Major Program Requirements

Major core requirements

GEOL 1100 Principles of Geology with Laboratory 4
or GEOL 1200 Environmental Geology with Laboratory 4
or GEOL 2130 Physical Geology for Scientists and Engineers 4
GEOL 2350 Historical Geology 3
GEOL 2360 Historical Geology Laboratory 1
GEOL 2400 Surficial Earth Processes and Products with Laboratory 4
GEOL 3250 Mineralogy 5
GEOL 3650 Structural Geology 4
GEOL 3800 Sedimentology and Stratigraphy with Lab 4
GEOL 4650 Plate Tectonics 3
GEOL 4900 Igneous and Metamorphic Petrology with Laboratory 4
GEOL 4992 Geology Field Camp 6
One additional geological sciences course at or above 2000 level (except GEOL 2130) 3
Four additional geological sciences courses at or above 3000 level (except GEOL 3085, can include 3 hr of GEOL 4950) 12

Related courses 26-31

Track I
CHEM 1320 College Chemistry I 4
CHEM 1330 College Chemistry II 4
PHYSCS 2750 University Physics I 5
PHYSCS 2760 University Physics II 5
MATH 1500 Analytic Geometry and Calculus I 5
MATH 1700 Calculus II 5
MATH 2300 Calculus III 3

Track II
CHEM 1320 College Chemistry I 4
CHEM 1330 College Chemistry II 4
PHYSCS 1210 College Physics I 4
PHYSCS 1220 College Physics II 4
MATH 1500 Analytic Geometry and Calculus I 5
MATH 1700 Calculus II 5

Semester Plan
Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

First Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>CR</th>
<th>Fall</th>
<th>CR</th>
<th>Spring</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHEL 1100 or 1200</td>
<td>4</td>
<td>GEOL 2350</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHEM 1320</td>
<td>4</td>
<td>GEOL 2360</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 1160</td>
<td>5</td>
<td>CHEM 1330</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENGL 1000</td>
<td>3</td>
<td>MATH 1500</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR American History 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR Political Science Course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>CR</th>
<th>Fall</th>
<th>CR</th>
<th>Spring</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHEL 2110 or 2400</td>
<td>4-5</td>
<td>GEOL 3800</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 3250</td>
<td>5</td>
<td>PHYSCS 2750</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 1700</td>
<td>5</td>
<td>Social/Behavioral Science Course</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities/Fine Arts Course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Humanities/Fine Arts Course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>17-18</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Third Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>CR</th>
<th>Fall</th>
<th>CR</th>
<th>Spring</th>
<th>CR</th>
<th>Summer</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEOL 3300</td>
<td>3</td>
<td>GEOL 2000+ Elective 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 3650</td>
<td>4</td>
<td>GEOL 3000+ Elective 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYSCS 2760</td>
<td>5</td>
<td>Foreign Language OR Alternative 3-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foreign Language OR Alternative 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>12-14</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fourth Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>CR</th>
<th>Fall</th>
<th>CR</th>
<th>Spring</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEOL 4650</td>
<td>3</td>
<td>GEOL 4900</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 3000+ Elective Course 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOL 3000+ Elective Course 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Elective Course 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social/Behavioral Science Course</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 2000-level Social/Behavioral Course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Language OR Alternative</td>
<td>3-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 125-130