<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr.</th>
<th>Sched.</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Lit.</td>
<td>*MATH 1210 - Calculus I</td>
<td>4</td>
<td>F/S/Su</td>
<td>MATH 1050 &amp; 1060 or ACT 26+</td>
</tr>
<tr>
<td>Physical Science</td>
<td>CHEM 1210/1215</td>
<td>5</td>
<td>F/S/Su</td>
<td>MATH 1050 or ACT 26+</td>
</tr>
</tbody>
</table>

Other GE Courses are required to graduate with a Bachelor’s Degree from SUU. The above-listed courses count for both GE and major requirements.

### Chemistry Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr.</th>
<th>Sched.</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1210/1215</td>
<td>General Chemistry I/Lab</td>
<td>4/1</td>
<td>F/S/Su</td>
<td>MATH 1050 or ACT 26+</td>
</tr>
<tr>
<td>CHEM 1220/1225</td>
<td>General Chemistry II/Lab</td>
<td>4/1</td>
<td>S/Su</td>
<td>CHEM 1210/1215</td>
</tr>
<tr>
<td>CHEM 2010</td>
<td>Chemical Lab Safety</td>
<td>1</td>
<td>F-Odd</td>
<td>CHEM 1210/1215</td>
</tr>
<tr>
<td>CHEM 2310/2315</td>
<td>Organic Chemistry I/Lab</td>
<td>4/1</td>
<td>F/S</td>
<td>CHEM 1220/1225</td>
</tr>
<tr>
<td>CHEM 2320/2325</td>
<td>Organic Chemistry II/Lab</td>
<td>4/1</td>
<td>S/Su</td>
<td>CHEM 2310/2315</td>
</tr>
<tr>
<td>CHEM 3000/3005</td>
<td>Quantitative Analysis/Lab</td>
<td>3/1</td>
<td>F</td>
<td>CHEM 1220/1225</td>
</tr>
<tr>
<td>CHEM 3160</td>
<td>Intermediate Inorganic Chem.</td>
<td>3</td>
<td>F-Even</td>
<td>CHEM 2310/2315</td>
</tr>
<tr>
<td>CHEM 3610/3615</td>
<td>Physical Chemistry I/Lab</td>
<td>3/1</td>
<td>F</td>
<td>CHEM 1220/1225; MATH 1220</td>
</tr>
<tr>
<td>CHEM 3620/3625</td>
<td>Physical Chemistry II/Lab</td>
<td>3/1</td>
<td>S</td>
<td>CHEM 3610/3615</td>
</tr>
<tr>
<td><strong>CHEM 4230</strong></td>
<td>Instrumental Analysis</td>
<td>3</td>
<td>S-Even</td>
<td>CHEM 3000/3005 or 3620/3625</td>
</tr>
<tr>
<td>CHEM 4240</td>
<td>Analysis Laboratory</td>
<td>2</td>
<td>S</td>
<td>CHEM 4230 (can be taken concurrently)</td>
</tr>
<tr>
<td>CHEM 4990</td>
<td>Chemical Lit. and Seminar</td>
<td>1</td>
<td>S</td>
<td>CHEM 2320/25 or any UD CHEM course</td>
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</tbody>
</table>

### Required Math Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr.</th>
<th>Sched.</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>MATH 1210</td>
<td>Calculus I</td>
<td>4</td>
<td>F/S/Su</td>
<td>MATH 1050 &amp; 1060 or ACT 26+</td>
</tr>
<tr>
<td>MATH 1220</td>
<td>Calculus II</td>
<td>4</td>
<td>F/S</td>
<td>MATH 1210</td>
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</tbody>
</table>

Students completing the Chemistry - Teacher Education Emphasis major must complete one of the following minors:

### Required Physics Teacher Education Minor Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr.</th>
<th>Sched.</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MATH 2250</strong></td>
<td>Linear Alg. &amp; Diff. Equations</td>
<td>4</td>
<td>F</td>
<td>MATH 1220</td>
</tr>
<tr>
<td>PHYS 2210/2215</td>
<td>Phys. for Sci. and Engin. I/Lab</td>
<td>4/1</td>
<td>F/S</td>
<td>MATH 1210</td>
</tr>
<tr>
<td>PHYS 2220/2225</td>
<td>Phys. for Sci. and Engin. II/Lab</td>
<td>4/1</td>
<td>F/S</td>
<td>PHYS 2210/2215; MATH 1220</td>
</tr>
<tr>
<td>ENGR 2250/2255</td>
<td>Electric Circuits/Lab</td>
<td>3/1</td>
<td>S</td>
<td>PHYS 2220/2225; MATH 2250</td>
</tr>
<tr>
<td>PHYS 3310</td>
<td>Quantum Physics I</td>
<td>3</td>
<td>As needed</td>
<td>PHYS 2210/2215, 2220/2225</td>
</tr>
<tr>
<td>PHYS 3320</td>
<td>Quantum Physics II</td>
<td>3</td>
<td>As needed</td>
<td>PHYS 3310</td>
</tr>
</tbody>
</table>

### Required Mathematics Education Minor Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr.</th>
<th>Sched.</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2270</td>
<td>Linear Algebra</td>
<td>3</td>
<td>F/S</td>
<td>MATH 1220</td>
</tr>
<tr>
<td>MATH 3120</td>
<td>Transition to Advanced Math.</td>
<td>3</td>
<td>F/S</td>
<td>MATH 1220 &amp; 2270</td>
</tr>
<tr>
<td>MATH 3130</td>
<td>Modern Geometrics</td>
<td>3</td>
<td>S</td>
<td>MATH 3120</td>
</tr>
<tr>
<td>MATH 3700</td>
<td>Probability and Statistics</td>
<td>4</td>
<td>F/S</td>
<td>MATH 1220</td>
</tr>
<tr>
<td>MATH 4900</td>
<td>Methods of Teaching Secondary Math</td>
<td>3</td>
<td>F</td>
<td>MATH 1210 &amp; (MATH 1040 or 3700)</td>
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</tbody>
</table>

### Required Geology Teacher Education Minor Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr.</th>
<th>Sched.</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEO 1010/1015</strong></td>
<td>Geology Introductory Survey/Lab</td>
<td>3/1</td>
<td>As needed</td>
<td></td>
</tr>
<tr>
<td>GEO 1110/1115</td>
<td>Physical Geology/Lab</td>
<td>3/1</td>
<td>F/S</td>
<td></td>
</tr>
<tr>
<td>GEO 1220/1225</td>
<td>Historical Geology/Lab</td>
<td>3/1</td>
<td>S</td>
<td>***GEO 1110/1115</td>
</tr>
<tr>
<td>GEO 1500</td>
<td>Hand Sample Rock Identification</td>
<td>2</td>
<td>F</td>
<td>GEO 1010/1015</td>
</tr>
<tr>
<td>GEO 3210/3215</td>
<td>Mineralogy/Lab</td>
<td>3</td>
<td>F</td>
<td>CHEM 1210/1215; ***GEO 1110/1115</td>
</tr>
</tbody>
</table>
### Additional Degree Requirements:

All Chemistry majors must successfully complete an exit exam before graduation.

To be considered for admission to the chemistry program, students must have a minimum 2.5 cumulative GPA and have completed CHEM 1210/15, 1220/25 and MATH 1210, 1220. No pre-chemistry students may enroll in courses with numbers greater than 2999 without formally declaring themselves chemistry majors.

Credits greater than 10 years old will not be accepted in this major.

All Education Requirements for Secondary Licensure (38-41 Credits) are on a separate worksheet form and must be completed in addition to major requirements.

- If not Calculus-ready, students must take MATH 1050 and MATH 1060 before taking MATH 1210.
- ** Indicates the course is needed as a pre-requisite for a required course.
- *** Indicates one of numerous options for prerequisite coursework. See advisor or catalog for details/more options.

#### B.S. in Chemistry: Teacher Education, 2018-2019

<table>
<thead>
<tr>
<th>Geology Teacher Education Minor Electives</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 3010/3015</td>
<td>Environmental Geology/Lab</td>
<td>3/1</td>
<td>S-Odd</td>
<td>***GEO 1110/1115</td>
<td></td>
</tr>
<tr>
<td>GEO 3110/3115</td>
<td>Paleontology/Lab</td>
<td>3/1</td>
<td>S-Even</td>
<td>GEO 1220/1225</td>
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<tr>
<td>GEO 3170/3175</td>
<td>Oceanography/Lab</td>
<td>3/1</td>
<td>As needed</td>
<td>***GEO 1110/1115</td>
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<tr>
<td>GEO 3410/3415</td>
<td>Sedimentary and Stratigraphy/Lab</td>
<td>3/1</td>
<td>F-Even</td>
<td>GEO 1220/1225</td>
<td></td>
</tr>
<tr>
<td>GEO 3510/3515</td>
<td>Structural Geology/Lab</td>
<td>3/1</td>
<td>F-Even</td>
<td>GEO 1220/1225; MATH 1050,1060</td>
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<tr>
<td>GEO 4000</td>
<td>Selected Field Trips</td>
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<td>F/S</td>
<td>Instructor Permission</td>
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<tr>
<td>GEO 4070</td>
<td>Applied Geochemistry</td>
<td>3</td>
<td>S-Odd</td>
<td>GEO 3120/3125, CHEM 1220/1225</td>
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</table>

<table>
<thead>
<tr>
<th>Required Geography Education Teaching Minor Courses</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 1000/1005</td>
<td>Earth's Natural Environments/Lab</td>
<td>3/1</td>
<td>F/S</td>
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</tr>
<tr>
<td>GEOG 1300</td>
<td>Globalization in the 21st Century</td>
<td>3</td>
<td>F/S</td>
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</tr>
<tr>
<td>GEOG 3600</td>
<td>Geography of Utah</td>
<td>3</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>GEOG 4900</td>
<td>Teaching Methods of Geography</td>
<td>2</td>
<td>As needed</td>
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</table>

<table>
<thead>
<tr>
<th>Geography Education Teaching Minor Electives</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGCS 3560/3565</td>
<td>Soils/Lab</td>
<td>3</td>
<td>F</td>
<td>CHEM 1210/1215</td>
<td></td>
</tr>
<tr>
<td>GEOG 1400</td>
<td>Human Geography</td>
<td>3</td>
<td>F</td>
<td></td>
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</tr>
<tr>
<td>GEOG 3110/3115</td>
<td>The Earth from Space: Intro. to Remote Spacing/Lab</td>
<td>3</td>
<td>S-Odd</td>
<td></td>
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<tr>
<td>GEOG 3220/3225</td>
<td>Weather and Climate/Lab</td>
<td>3</td>
<td>As needed</td>
<td></td>
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<tr>
<td>GEOG 3300</td>
<td>World Political Geography</td>
<td>3</td>
<td>As needed</td>
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<tr>
<td>GEOG 3350/3355</td>
<td>Geomorphology/Lab</td>
<td>2/1</td>
<td>As needed</td>
<td>GEO 1110 or GEOG 1000</td>
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<tr>
<td>GEOG 3400</td>
<td>Environmental Geography</td>
<td>3</td>
<td>As needed</td>
<td></td>
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<tr>
<td>GEOG 3500/3505</td>
<td>Intro. to Cartography/Lab</td>
<td>3/1</td>
<td>F-Odd</td>
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<tr>
<td>GEOG 3550/3555</td>
<td>Prin. of Geographic Info. Systems</td>
<td>3/1</td>
<td>F</td>
<td></td>
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<tr>
<td>GEOG 3620</td>
<td>Geography of North America</td>
<td>3</td>
<td>As needed</td>
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</table>