**Minor in Chemistry**

Requirements (56-61 units)

### Requirements for a minor in Chemistry

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 215</td>
<td>General Chemistry I: Atomic Structure and Chemical Bonding</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 216</td>
<td>General Chemistry II: Principles of Chemical Reactions</td>
<td>6</td>
</tr>
</tbody>
</table>

A minimum of twelve units, choose Group A or B below: 12-15

**Group A:**
- CHEM 221A Organic Chemistry I Lecture
- CHEM 221B Organic Chemistry I Lab
- CHEM 222A Organic Chemistry II Lecture
- CHEM 222B Organic Chemistry II Lab
- CHEM 223A Organic Chemistry III Lecture
- CHEM 223B Organic Chemistry III Lab

**Group B:**
- CHEM 321 Principles of Organic Chemistry I
- CHEM 322 Principles of Organic Chemistry II
- CHEM 323 Principles of Organic Chemistry III
- CHEM 345 Modern Quantitative Analysis | 5 |

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<tbody>
<tr>
<td>MATH 192</td>
<td>Methods of Calculus</td>
<td>4</td>
</tr>
<tr>
<td>or MATH 212</td>
<td>Calculus II</td>
<td></td>
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</tbody>
</table>

One year of introductory physics. CSUSB physics sequences that satisfy this requirement are: 13-15

**Sequence A:**
- PHYS 121 Basic Concepts of Physics I
- PHYS 122 Basic Concepts of Physics II
- PHYS 123 Basic Concepts of Physics III

**Sequence B:**
- PHYS 221 General Physics I
- PHYS 222 General Physics II
- PHYS 223 General Physics III

Ten additional upper-division units in chemistry. The following courses may not be used to satisfy this requirement: CHEM 301, CHEM 590A, CHEM 590B, or CHEM 597.

Total Units | 56-61