Colorado State University  
**Natural Sciences B.S.**  
**Physical Science Concentration**

This Major Completion Map is designed to help students and their advisors build a semester-by-semester course schedule that will enable students to complete their degree within the minimum number of semesters established by the program of study. The columns on the left list the full Program of Study, with a hyperlink to CSU's Online Catalog. The middle section lists Benchmarks, which are typically pre-requisites for subsequent coursework, minimum grades or GPA, courses offered on a limited basis, or degree conditions such as portfolio review or accreditation requirements. Benchmarks must be completed by the end of the term in which they are listed for the student to have a clear path to timely graduation. In most cases, it will be wiser for students to complete benchmarks before the semester in which they are listed in the Benchmarks column. When that is the case, a benchmark will appear earlier in the section on the right listing Strongly Recommended. When building a course schedule for an individual term, students are advised to schedule courses from the Benchmarks and Strongly Recommended columns first. The remaining courses can be more flexibly scheduled over time. Students should average a full credit load each term (typically an average of 15 credits per term) in order to graduate in the minimum number of semesters.

### Distinctive Requirements for Degree Program

All Chemistry Education majors must maintain a 2.75 GPA and receive a C or better in all content and education courses for licensure. All Chemistry Education majors are expected to be prepared to take CHEM111/112 their first semester which requires MATH118. All course work must be completed prior to Student Teaching (AUCC 4A/B/C requirement). Admission into the teacher licensure program is required for phase II education courses and above.

### First Year Semester 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Critical Benchmark(s)</th>
<th>Strongly Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO 150</td>
<td>College Composition (AUCC 1A)</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>MATH 155</td>
<td>Calculus for Biological Scientists I</td>
<td>4</td>
<td></td>
<td>MATH 155 or 160</td>
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<td>or</td>
<td>(AUCC 1B)</td>
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<tr>
<td>MATH 160</td>
<td>Calculus for Physical Scientists I</td>
<td>4</td>
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<tr>
<td>AUCC 3C</td>
<td>Social &amp; Behavioral Sciences</td>
<td>3</td>
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<td></td>
<td>Minor Requirement Courses</td>
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**Total Credits:** 16

### First Year Semester 2

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<tbody>
<tr>
<td>CHEM 111</td>
<td>General Chemistry I (AUCC 3A)</td>
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<td>CHEM 111</td>
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<td>CHEM 112</td>
<td>General Chemistry Laboratory I (AUCC 3A)</td>
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<td>CHEM 112</td>
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<tr>
<td>MATH 255</td>
<td>Calculus for Biological Scientists II</td>
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<td>MATH 255 or 161</td>
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<tr>
<td>or</td>
<td>(AUCC 3A)</td>
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<td></td>
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<tr>
<td>MATH 161</td>
<td>Calculus for Physical Scientists II</td>
<td>4</td>
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<tr>
<td></td>
<td>Minor Requirement Course</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>Electives</td>
<td>3</td>
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<td>MATH 124/5/6</td>
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**Total Credits:** 15
### Sophomore Semester 3

<table>
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</thead>
<tbody>
<tr>
<td>CHEM 113</td>
<td>General Chemistry II</td>
<td>3</td>
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<tr>
<td>CHEM 114</td>
<td>General Chemistry Laboratory II</td>
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<tr>
<td>PH 141</td>
<td>Physics for Scientists and Engineers I (AUCC 3A)</td>
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<td>PH 141</td>
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<td>Minor Requirement Course</td>
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<td>MATH155 or 160</td>
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**Total Credits:** 16

### Sophomore Semester 4

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<tbody>
<tr>
<td>PH 142</td>
<td>Physics for Scientists and Engineers II</td>
<td>5</td>
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<tr>
<td>STAT 301</td>
<td>Introduction to Statistical Methods</td>
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**Total Credits:** 12

### Junior Semester 5

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<tbody>
<tr>
<td>AUCC 2</td>
<td>Advanced Writing</td>
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<tr>
<td>AUCC 3B</td>
<td>Arts and Humanities</td>
<td>3</td>
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<tr>
<td>AUCC 3E</td>
<td>Global and Cultural Awareness</td>
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<td>Minor Requirement Courses</td>
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**Total Credits:** 15

### Junior Semester 6

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<tbody>
<tr>
<td>BZ 104</td>
<td>Basic Concepts of Plant Life</td>
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<td>BZ 105</td>
<td>Basic Concepts of Plant Life Lab</td>
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<td>or</td>
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<tr>
<td>BZ 110</td>
<td>Principles of Animal Biology</td>
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<td>BZ 111</td>
<td>Animal Biology Laboratory</td>
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<td>BZ 120</td>
<td>Principles of Plant Biology</td>
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<td>or</td>
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<tr>
<td>LIFE 102</td>
<td>Attributes of Living Systems</td>
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<td>AUCC 3D</td>
<td>Historical Perspectives</td>
<td>3</td>
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**Total Credits:** 16

### Senior Semester 7

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<th>Critical Benchmark(s)</th>
<th>Strongly Recommended</th>
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</thead>
<tbody>
<tr>
<td>AUCC 3B</td>
<td>Arts and Humanities</td>
<td>3</td>
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</tr>
<tr>
<td>AUCC 4B</td>
<td>Depth and Integration</td>
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<td>Electives</td>
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### Senior Semester 8

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<tbody>
<tr>
<td>AUCC 4C</td>
<td>Capstone Course</td>
<td>3</td>
<td>The Critical Benchmark courses for the 8th semester are the remaining courses in the entire program of study.</td>
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<tr>
<td>AUCC 4A</td>
<td>Using Competencies</td>
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<td>Minor Requirement Courses</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Electives</td>
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</tr>
</tbody>
</table>

**Total Credits:** 15

**Total Program Credits:** 120

POS: FA15 (UCC 3/27/15)

- (F) - Fall only course offering
- (S) - Spring only course offering

Major Completion Maps are designed as a guide to assist students in navigating their official program of study. This Major Completion Map may differ in credit arrangement and course order. It is the responsibility of students, in consultation with their academic advisors, to ensure all program requirements, according to the official program of study, have been satisfied.