# MAJOR IN DATA SCIENCE, MATHEMATICS CONCENTRATION

## Major Completion Map

### Freshman

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Critical</th>
<th>Recommended</th>
<th>AUCC</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO 150</td>
<td></td>
<td></td>
<td>1A</td>
<td>3</td>
</tr>
<tr>
<td>DSCI 100</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MATH 160</td>
<td></td>
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<td>1B</td>
<td>4</td>
</tr>
<tr>
<td>Select one course from the following:</td>
<td>X</td>
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<tr>
<td>CS 163</td>
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<tr>
<td>CS 164</td>
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<tr>
<td>Arts and Humanities <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities">link</a></td>
<td>3B</td>
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**Total Credits** 15

### Semester 2

<table>
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<tr>
<td>CS 165</td>
<td>X</td>
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<tr>
<td>MATH 161</td>
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<td>1B</td>
<td>4</td>
</tr>
<tr>
<td>STAT 158</td>
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<td></td>
<td>1</td>
</tr>
<tr>
<td>STAT 315</td>
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<td>3</td>
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<tr>
<td>Biological and Physical Sciences <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences">link</a></td>
<td>3A</td>
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**Total Credits** 16

### Sophomore

<table>
<thead>
<tr>
<th>Semester 3</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>CS 220</td>
<td>X</td>
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<tr>
<td>MATH 261</td>
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<tr>
<td>STAT 341</td>
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<tr>
<td>Social and Behavioral Sciences <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences">link</a></td>
<td>3C</td>
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**Total Credits** 14

### Semester 4

<table>
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<tr>
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<tbody>
<tr>
<td>DSCI 235</td>
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<td>DSCI 369</td>
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<td>MATH 151</td>
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<tr>
<td>STAT 342</td>
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</tr>
<tr>
<td>Biological and Physical Sciences <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences">link</a></td>
<td>3A</td>
<td></td>
<td>3</td>
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<tr>
<td>Historical Perspectives <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives">link</a></td>
<td>3D</td>
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**Total Credits** 16

### Junior

<table>
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<tr>
<th>Semester 5</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>DSCI 320</td>
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<tr>
<td>Data Science Elective (See List on Concentration Requirements Tab)</td>
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<td>3-4</td>
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<tr>
<td>Math Elective (See List on Concentration Requirements Tab)</td>
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<td>Select one course from the following:</td>
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<tr>
<td>CO 300</td>
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<td>Writing Arguments (GT-CO3)</td>
<td>2</td>
<td>3</td>
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</table>

**Total Credits**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CO 301B</td>
<td>Writing in the Disciplines: Sciences (GT-CO3)</td>
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<tr>
<td>CO 302</td>
<td>Writing in Digital Environments (GT-CO3)</td>
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<tr>
<td>JTC 300</td>
<td>Strategic Writing and Communication (GT-CO3)</td>
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</tr>
<tr>
<td>Elective</td>
<td></td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
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**Semester 6**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DSCI 335</td>
<td>Inferential Reasoning in Data Analysis</td>
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<tr>
<td>DSCI 336</td>
<td>Data Graphics and Visualization</td>
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<tr>
<td>Data Science Elective (See List on Concentration Requirements Tab)</td>
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<tr>
<td>Math Elective (See List on Concentration Requirements Tab)</td>
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<tr>
<td>Arts and Humanities (<a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities</a>)</td>
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<tr>
<td><strong>Total Credits</strong></td>
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**Senior**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DSCI 445</td>
<td>Statistical Machine Learning</td>
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<tr>
<td>Data Science Elective (See List on Concentration Requirements Tab)</td>
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<tr>
<td>Math Elective (See List on Concentration Requirements Tab)</td>
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<tr>
<td>Diversity and Global Awareness (<a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-global-awareness">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-global-awareness</a>)</td>
<td>3E</td>
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<tr>
<td>Elective</td>
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<tr>
<td><strong>Total Credits</strong></td>
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<td><strong>15-16</strong></td>
</tr>
<tr>
<td>Semester 8</td>
<td><strong>Critical</strong> <strong>Recommended</strong> <strong>AUCC</strong> <strong>Credits</strong></td>
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</tr>
<tr>
<td>DSCI 478</td>
<td>Capstone Group Project in Data Science</td>
<td>X</td>
</tr>
<tr>
<td>Data Science Elective (See List on Concentration Requirements Tab)</td>
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<td></td>
</tr>
<tr>
<td>Math Elective (See List on Concentration Requirements Tab)</td>
<td>X</td>
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<tr>
<td>Elective</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>The benchmark courses for the 8th semester are the remaining courses in the entire program of study.</td>
<td>X</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>13-15</strong></td>
</tr>
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**Program Total Credits:** 120