2018 - 2019 Major Map  
Chemistry, BA  

School/College: **College of Liberal Arts and Sciences**  
Location: Tempe campus  

LACHMBA and  
Secondary Education,  
BAE  

Mary Lou Fulton Teachers College  
TESEDBAE  

<table>
<thead>
<tr>
<th>Term 1 0 - 15 Credit Hours Critical course signified by †</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 117: General Chemistry for Majors I (SQ) AND CHM 111: General Chemistry Laboratory for Majors I (SQ) OR CHM 113: General Chemistry I (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>MAT 270: Calculus with Analytic Geometry I (MA)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
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</tr>
<tr>
<td>LIA 101: Student Success in the College of Liberal Arts and Sciences OR TEL 101: Professional Educator Series: My Footprint Humanities, Arts and Design (HU) AND Global Awareness (G)</td>
<td>1</td>
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<tr>
<td>Humanities, Arts and Design (HU) AND Global Awareness (G)</td>
<td>3</td>
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</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td><strong>15</strong></td>
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</tbody>
</table>

**Term 2 15 - 30 Credit Hours Critical course signified by †**  

<table>
<thead>
<tr>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 118: General Chemistry for Majors II (SQ) AND CHM 112: General Chemistry Laboratory for Majors II (SQ) OR CHM 116: General Chemistry II (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>MAT 271: Calculus with Analytic Geometry II (MA)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>† Complete ENG 101 OR ENG 105 OR ENG 107 course(s).</td>
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<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td><strong>15</strong></td>
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</table>

**Term 3 30 - 45 Credit Hours Critical course signified by †**  

<table>
<thead>
<tr>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 233: General Organic Chemistry I</td>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>CHM 237: General Organic Chemistry Laboratory I</td>
<td>1</td>
<td>C</td>
</tr>
<tr>
<td>PHY 111: General Physics (SQ)</td>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>PHY 113: General Physics Laboratory (SQ)</td>
<td>1</td>
<td>C</td>
</tr>
</tbody>
</table>

* SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses  
* Mathematics Placement Assessment score determines placement in mathematics course  
* ASU 101 or college-specific equivalent  
* First-Year Seminar required of all freshman students.  
* Select your career interest area and play mc3@ASU  

[Handshake](#)
**Second Language: Requirement satisfied through the following:**

- Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.

**Computer/Statistics/Quantitative Applications (CS)**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
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<tbody>
<tr>
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</table>

Complete First-Year Composition requirement.

Complete Mathematics (MA) requirement.

**Term hours subtotal:** 15

### Term 4 45 - 60 Credit Hours

Critical course signified by ☀

<table>
<thead>
<tr>
<th>Hours</th>
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</tbody>
</table>

**PHY 112: General Physics (SQ)**

- 3  
- C

**PHY 114: General Physics Laboratory (SQ)**

- 1  
- C

**CHM 234: General Organic Chemistry II**

- 3  
- C

**CHM 238: General Organic Chemistry Laboratory II**

- 1  
- C

Second Language: Requirement satisfied through the following:

- Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.

**Social-Behavioral Sciences (SB) AND Historical Awareness (H) (GCU 113 recommended)**

- 3  
- C

**Term hours subtotal:** 15

### Term 5 60 - 77 Credit Hours

Necessary course signified by ☀

<table>
<thead>
<tr>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**CHM 325: Analytical Chemistry**

- 3  
- C

**CHM 326: Advanced Analytical Chemistry Laboratory**

- 1  
- C

**EDP 313: Childhood and Adolescence (SB)**

- 3  
- C

**SPE 222: Orientation to Education of Exceptional Children (SB & C)**

- 3  
- C

Second Language: Requirement satisfied through the following:

- Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.

**Humanities, Arts and Design (HU)**

- 3  
- C

Minimum 2.50 GPA ASU Cumulative.

**Term hours subtotal:** 17

### Term 6 77 - 92 Credit Hours

Necessary course signified by ☀

<table>
<thead>
<tr>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
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</thead>
<tbody>
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</tbody>
</table>

**CHM 341: Elementary Physical Chemistry**

- 3  
- C

**SED 398: Clinical Experience**

- 1  
- C

**SPE 417: Inclusion Practices at the Secondary Level**

- 3  
- C

**TEL 311: Instruction and Management in the Inclusive Classroom**

- 3  
- C

**CHM OR BCH Upper Division Elective**

- 3  
- C

**CHM 343: Elementary Physical Chemistry Laboratory**

- 1  
- C

**Elective**

- 1  

Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).

Minimum 2.50 GPA ASU Cumulative.

**Term hours subtotal:** 15
### Term 7 92 - 108 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLE 407: SEI for Secondary Students (L)</td>
<td>3</td>
<td>C</td>
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<tr>
<td>CHM 453: Inorganic Chemistry</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>RDG 323: Literacy Processes in Content Areas</td>
<td>3</td>
<td>C</td>
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<tr>
<td>SED 322: Classroom Leadership in Secondary Schools (L)</td>
<td>3</td>
<td>C</td>
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</tr>
<tr>
<td>SED 403: Secondary Principles, Curriculum and Methods OR CHM 480: Methods of Teaching Chemistry OR SED 482: Science Teaching Methods for Secondary Schools</td>
<td>3</td>
<td>C</td>
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</tr>
<tr>
<td>SED 496: Clinical Experience III</td>
<td>1</td>
<td>C</td>
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</tbody>
</table>

Minimum 2.50 GPA ASU Cumulative.

**Term hours subtotal:** 16

### Term 8 108 - 120 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 478: Student Teaching: Secondary Education (Grades 6-12) OR Upper Division Non-Teacher Certification Track</td>
<td>12</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

Minimum 2.50 GPA ASU Cumulative.

**Term hours subtotal:** 12

### Notes:
- Please keep in mind that the applicability of a specific transfer course toward an ASU degree program depends on the requirements of the department, division, college or school in which you are enrolled at ASU. Transfer agreements that guarantee the completion of university level requirements do not necessarily meet college and major requirements. Please consult with an advisor for more information.

- If you choose not to participate in student teaching, please select 12 hours from non-certification track group below. Without student teaching, you will not be qualified for Arizona Department of Education Secondary Education Certification, but you will still earn a degree in Secondary Education. You may also be eligible for an Arizona Subject Matter Expert credential. Please consult with your academic advisor and the Arizona Department of Education for clarification.

### Hide Course List(s)/Track Group(s)

- Non-Teacher Certification Track
  - ECS Upper Division Elective
  - EDP Upper Division Elective
  - EDT Upper Division Elective
  - SCN Upper Division Elective
  - SED Upper Division Elective
  - SPE Upper Division Elective
  - SPF Upper Division Elective
  - TEL Upper Division Elective
  - USL Upper Division Elective

- Apply for full-time career opportunities.
General University Requirements Legend

General Studies Core Requirements:
- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:
- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2018 - 2019 academic year.