2019 - 2020 Major Map
Chemistry, BS

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

<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>
</table>
| 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) | 4 | C | 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 Areas and play me3@ASU |
| MAT 270: Calculus with Analytic Geometry I (MA) | 4 | C |  |
| ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition | 3 | C |  |
| LIA 101: Student Success in the College of Liberal Arts and Sciences | 1 |  |  |
| Social-Behavioral Sciences (SB) AND Global Awareness (G) | 3 |  |  |
| Term hours subtotal: | 15 | | |

<table>
<thead>
<tr>
<th>Term 2 15 - 30 Credit Hours Critical course signified by</th>
<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>
<td>Connect with a Career Advisor by registering for a Handshake account.</td>
</tr>
<tr>
<td>MAT 271: Calculus with Analytic Geometry II (MA)</td>
<td>4</td>
<td>C</td>
<td></td>
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<tr>
<td>PHY 121: University Physics I: Mechanics (SQ)</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHY 122: University Physics Laboratory I (SQ)</td>
<td>1</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Complete ENG 101 OR ENG 105 OR ENG 107 course(s).</td>
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<td></td>
<td></td>
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<tr>
<td>Term hours subtotal:</td>
<td>15</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Term 3 30 - 45 Credit Hours Critical course signified by</th>
<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>
<td></td>
</tr>
</tbody>
</table>
• Build your professional connections - join the ASU Mentor Network. |
| CHM 237: General Organic Chemistry Laboratory I | 1 | C |  |
| PHY 131: University Physics II: Electricity and Magnetism (SQ) | 3 | C |  |
| MAT 272: Calculus with Analytic Geometry III (MA) | 4 | C |  |
| PHY 132: University Physics Laboratory II (SQ) | 1 | C |  
• Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C) 3 |
| Complete First-Year Composition requirement. | | |  
| Complete Mathematics (MA) requirement. | | |  |
| Term hours subtotal: | 15 | | |

<table>
<thead>
<tr>
<th>Term 4 45 - 60 Credit Hours Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 240: Mathematical Methods in Chemistry (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
CHM 234: General Organic Chemistry II 3 C
CHM 238: General Organic Chemistry Laboratory II 1 C
Literacy and Critical Inquiry (L) 3

Complete 2 courses:
Elective 5

Term hours subtotal: 15

Term 5 60 - 74 Credit Hours Necessary course signified by ★

★ CHM 345: Physical Chemistry I 3 C
★ CHM 325: Analytical Chemistry 3 C
★ CHM 326: Advanced Analytical Chemistry Laboratory 1 C
★ CHM 348: Physical Chemistry Laboratory I (L) 1 C
Humanities, Arts and Design (HU) 3
Elective 3

Term hours subtotal: 14

Term 6 74 - 89 Credit Hours Necessary course signified by ★

★ CHM 346: Physical Chemistry II 3 C
★ CHM 327: Instrumental Analysis 3 C
★ CHM 328: Instrumental Analysis Laboratory 2 C
★ CHM 349: Physical Chemistry Laboratory II (L) 1 C
Social-Behavioral Sciences (SB) AND Historical Awareness (H) 3
Upper Division Elective 3

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

Term hours subtotal: 15

Term 7 89 - 104 Credit Hours Necessary course signified by ★

★ CHM 453: Inorganic Chemistry 3 C
★ CHM 460: Biological Chemistry 3 C
CLAS Science and Society Elective 3 C
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB) 3
Upper Division Elective OR CHM 484: Internship 3

Term hours subtotal: 15

Term 8 104 - 120 Credit Hours Necessary course signified by ★

★ CHM 452: Inorganic Chemistry Laboratory (L) 1 C
CHM OR BCH Upper Division Elective 3 C
Upper Division CLAS Science and Society Elective 3 C

Complete 2 courses:
Upper Division Elective 6
Elective 3

Term hours subtotal: 16

• Transferring students shall take the equivalents to MAT 274 or MAT 275 (Differential Equations) and MAT 242 (Linear Algebra) in place of the 5 units of "elective". These two courses will allow the student to meet Term 4 critical tracking and the enrollment requirements for CHM 345 in Term 5. Discuss substitutions with major advisor.

• CHM 325, 326, 345, and 348 are only offered in the Fall semester.

• Create a first draft resume.

• CHM 327, 328, 346, and 349 are only offered in the Spring semester.

• Explore internship opportunities.

• CHM 453 is only offered in the Fall semester.

• Apply for full-time career opportunities.

• CHM 452 is only offered in the Spring semester.

• Upper Division CHM or BCH Elective must be completed at Tempe campus cannot be met with BCH 341, BCH 361, BCH 367, BCH 371, BCH 372, CHM 341, nor CHM 480.
• All students pursuing a B.S. or B.S.P. degree in the College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://clas.asu.edu/resources/science-society. At least one of the two courses must be upper division. Students must earn a C or better in the courses, and no more than one of the two can also be used to simultaneously fill a requirement of the major, minor or related area. Science and Society courses cannot also be used to fill the general studies HU, SB, SQ or SG requirements.

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.

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 2019 - 2020 academic year.