## 2018 - 2019 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:  | 4     | C             | • SAT, ACT, Accuplacer, IELTS or TOEFL score determines placement into first-year composition courses  
| General Chemistry Laboratory for Majors I (SQ) OR CHM 113:  |       |               | • Mathematics Placement Assessment score determines placement in mathematics course  
| General Chemistry I (SQ)                                   |       |               | • ASU 101 or college-specific equivalent  
| MAT 270: Calculus with Analytic Geometry I (MA)            | 4     | C             | First-Year Seminar required of all freshman students.  
| ENG 101 or ENG 102: First-Year Composition OR              |       |               | • Select your career interest area and play me3@ASU  
| ENG 105: Advanced First-Year Composition OR                | 3     | C             | |
| ENG 107 or ENG 108: First-Year Composition                 |       |               | |
| 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>
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</table>
| CHM 118: General Chemistry for Majors II (SQ) AND CHM 112: | 4     | C             | • Connect with a Career Advisor by registering for a Handshake account.  
| General Chemistry Laboratory for Majors II (SQ) OR CHM 116:  |       |               | |
| General Chemistry II (SQ)                                   |       |               | |
| MAT 271: Calculus with Analytic Geometry II (MA)            | 4     | C             | |
| PHY 121: University Physics I: Mechanics (SQ)              | 3     | C             | |
| PHY 122: University Physics Laboratory I (SQ)              | 1     | C             | |
| ENG 101 or ENG 102: First-Year Composition OR              | 3     | C             | Complete ENG 101 OR ENG 105 OR ENG 107 course(s).  
| ENG 105: Advanced First-Year Composition OR                |       |               | |
| ENG 107 or ENG 108: First-Year Composition                 |       |               | |

Term hours subtotal: 15

<table>
<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>
</table>
| CHM 233: General Organic Chemistry I                      | 3     | C             | • Network in your career interest area.  
| CHM 237: General Organic Chemistry Laboratory I           | 1     | C             | |
| PHY 131: University Physics II: Electricity and Magnetism (SQ) | 3   | C             | |
| PHY 132: University Physics Laboratory II (SQ)            | 1     | C             | |
| MAT 272: Calculus with Analytic Geometry III (MA)         | 4     | 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>
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</tbody>
</table>

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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 ⭐ Hours Minimum Grade Notes

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

Term hours subtotal: 14

Term 6 74 - 89 Credit Hours Necessary course signified by ⭐ Hours Minimum Grade Notes

⭐ CHM 346: Physical Chemistry II 3 C
⭐ CHM 349: Physical Chemistry Laboratory II (L) 1 C
⭐ CHM 327: Instrumental Analysis 3 C
⭐ CHM 328: Instrumental Analysis Laboratory 2 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 ⭐ Hours Minimum Grade Notes

⭐ 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 ⭐ Hours Minimum Grade Notes

⭐ 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 may take MAT 274 or MAT 275 (Differential Equations) and MAT 242 (Linear Algebra) in place of the 5 units of "elective". These two courses may allow the student to meet Term 4 critical tracking and the enrollment requirements for CHM 345 in Term 5.
- 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 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.

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

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.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum
Total College Residency Hrs: 12 minimum

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.