













## 2023 - 2024 Major Map

## Chemistry, BS

School/College: The College of Liberal Arts and Sciences  
LACHMBS

Term 1 0 - 15 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 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	<ul style="list-style-type: none"> <li>ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.</li> <li>Select your <a href="#">Career Interest Areas</a> and play <a href="#">me3@ASU</a>.</li> </ul>
 MAT 270: Calculus with Analytic Geometry I (MA) OR MAT 265: Calculus for Engineers I (MA)	4-3	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 Cultural Diversity in the U.S. (C)	3		
Term hours subtotal:		15-14	

Term 2 15 - 30 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 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)	4	C	<ul style="list-style-type: none"> <li>Connect with a career advisor by registering for a <a href="#">Handshake</a> account.</li> </ul>
 MAT 271: Calculus with Analytic Geometry II (MA) OR MAT 266: Calculus for Engineers II (MA)	4-3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	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	
PHY 122: University Physics Laboratory I (SQ)	1	C	
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:		15-14	

Term 3 30 - 45 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 CHM 233: General Organic Chemistry I	3	C	<ul style="list-style-type: none"> <li>Create a first draft <a href="#">resume</a>.</li> </ul>
 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) OR 4-3 C  
 MAT 267: Calculus for Engineers III (MA)


PHY 132: University Physics Laboratory II (SQ) 1 C

Humanities, Arts and Design (HU) AND Global Awareness (G) 3

 Complete First-Year Composition requirement.

Complete Mathematics (MA) requirement.

Term hours subtotal: 15-14

Term 4 45 - 60 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
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 CHM 240: Mathematical Methods in Chemistry (CS) 3 C

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

- CHM 240 is only offered in the Spring semester.
- Transfer students may need to take MAT 274 or MAT 275 (Differential Equations) and MAT 242 (Linear Algebra) in place of the five credit hours of Electives in Term 4. These courses will allow the student to meet Term 4 critical tracking and the prerequisites for CHM 345 in Term 5. Will still need substitution course; discuss options with major advisor.

Term 5 60 - 74 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
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 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) AND Historical Awareness (H) 3

Elective 3

Term hours subtotal: 14

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

Term 6 74 - 89 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
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 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) 3

Upper Division Elective 3

- CHM 327, CHM 328, CHM 346, and CHM 349 are only offered in the Spring semester.
- Explore [internship](#) opportunities.



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 <b>Necessary course signified by</b>	Hours	Minimum Grade	Notes
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CHM 453: Inorganic Chemistry

3

C

Science and Society Elective

3

C

CHM OR BCH Upper Division 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

- Upper Division CHM or BCH Elective must be completed at the Tempe campus and cannot be met with BCH 341, BCH 361, BCH 367, BCH 371, BCH 372, CHM 341, or CHM 480.
- Apply for **full-time career opportunities**.

Term 8 104 - 120 Credit Hours <b>Necessary course signified by</b>	Hours	Minimum Grade	Notes
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CHM 452: Inorganic Chemistry Laboratory (L)

1

C

CHM 460: Biological Chemistry

3

C

Upper Division Science and Society Elective

3

C

**Complete 2 courses:**  
Upper Division Elective

6

Elective

3

Term hours subtotal: 16

- CHM 452 and CHM 460 are only offered in the Spring semester.

- All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at <https://thecollege.asu.edu/resources/science-society>. At least one of the two courses must be upper-division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

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

## Notes:

- First-Year Composition: All students are placed in ENG 101 unless submission of SAT, ACT, Accuplacer, IELTS, or TOEFL score, or college-level transfer credit or test credit equivalent to ASU's first-year composition course(s), determine otherwise. Students on Polytechnic, Downtown Phoenix and West Campuses are encouraged to complete the Directed Self-Placement survey to choose the first-year composition option they believe best suits their needs. Visit: <https://cisa.asu.edu/DSP>
- Mathematics Placement Assessment score determines placement in first mathematics course.

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 next to courses on the major map were valid for the 2023 - 2024 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.