
















2022 - 2023 Major Map



Chemistry (Environmental Chemistry), BS




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



Term 1 0 - 15 Credit Hours Critical course signified by 	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"> ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students. Select your Career Interest Areas and play me3@ASU.
 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 Global Awareness (G)	3		
Term hours subtotal:	15-14		
Term 2 15 - 30 Credit Hours Critical course signified by 	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"> Connect with a career advisor by registering for a Handshake account.
 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 Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 233: General Organic Chemistry I	3	C	<ul style="list-style-type: none"> 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) OR MAT 267: Calculus for Engineers III (MA)	4-3	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: 15-14

Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 240: Mathematical Methods in Chemistry (CS)	3	C	<ul style="list-style-type: none"> 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 5 credit hours of Electives. These two courses will allow students to meet Term 4 critical tracking and the prerequisites for CHM 345 in Term 5. Will still require a substitution; discuss options with major advisor.
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:	5		
Elective			
Term hours subtotal:	15		

Term 5 60 - 76 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CHM 302: Environmental Chemistry	3	C	<ul style="list-style-type: none"> CHM 302, CHM 345, and CHM 348 are only offered in the Fall semester. Create a first draft resume.
CHM 345: Physical Chemistry I	3	C	
CHM 348: Physical Chemistry Laboratory I (L)	1	C	
Science and Society Elective	3	C	
Humanities, Arts and Design (HU)	3		
Elective	3		
Term hours subtotal:	16		

Term 6 76 - 90 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 GLG 321: Mineralogy	3	C	<ul style="list-style-type: none"> CHM 303 and GLG 321 are only offered in the Spring semester. Explore internship opportunities.
CHM 303: Environmental Chemistry Laboratory (L)	2	C	
Social-Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Complete 2 courses:	6		
Upper Division Elective			
 Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).			
Term hours subtotal:	14		

Term 7 90 - 106 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CHM 325: Analytical Chemistry	3	C	<ul style="list-style-type: none"> CHM 325 and CHM 326 are only offered in the Fall semester and must be taken on the Tempe campus. Apply for full-time career opportunities.
CHM 326: Advanced Analytical Chemistry Laboratory	1	C	
Upper Division 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		
Elective	3		
Term hours subtotal:	16		

Term 8 106 - 120 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CHM 481: Geochemistry	3	C	<ul style="list-style-type: none"> CHM 481 is only offered in the Spring semester.
BCH 361: Advanced Principles of Biochemistry	3	C	
BCH 367: Elementary Biochemistry Laboratory	1	C	
Complete 2 courses:	7		
Upper Division Elective			
Term hours subtotal:	14		

- 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 2022 - 2023 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.