











2024 - 2025 Major Map

Biochemistry, BS

School/College: [The College of Liberal Arts and Sciences](#)
LABCHBS

In order to complete the requirements of this program, some laboratory courses will be completed in-person at the Tempe Campus.

These laboratory courses will be offered during summer. This may impact your financial aid. Financial aid is available to those who apply and qualify, and students may receive funds to help cover costs for each semester of enrollment. The amount of financial aid that a student is eligible for varies depending on prior education experience and other individual factors. [Learn](#) more about summer financial aid and additional ways to cover summer costs.

Term 1 - A 0 - 7 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 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	<ul style="list-style-type: none"> ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.
ASU 101-LA: The ASU Experience	1		
Social and Behavioral Sciences (SOBE)	3		
Term hours subtotal:	7		
Term 1 - B 7 - 13 Credit Hours	Hours	Minimum Grade	Notes
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	<ul style="list-style-type: none"> View ASU Online first-year student registration information here.
MAT 265: Calculus for Engineers I (MATH OR MA)	3	C	
Term hours subtotal:	6		
Term 2 - A 13 - 20 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 113: General Chemistry I (SCIT OR SQ)	4	C	<ul style="list-style-type: none"> Select your career interest area and play me3@ASU.
MAT 266: Calculus for Engineers II (MATH OR MA)	3	C	
Term hours subtotal:	7		
Term 2 - B 20 - 27 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 116: General Chemistry II (SCIT OR SQ)	4	C	<ul style="list-style-type: none"> If interested in health-related professional programs, research the timeline for admissions preparation and general admission requirements.
Quantitative Reasoning (QTRS)	3		
Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	7		
Term 3 - A 27 - 34 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 PHY 111: General Physics (SCIT OR SQ)	3	C	<ul style="list-style-type: none"> Review the Career Guide for ASU Online students to learn about available career planning resources.
PHY 113: General Physics Laboratory (SCIT OR SQ)	1	C	
Humanities, Arts and Design (HUAD)	3		
Term hours subtotal:	7		
Term 3 - B 34 - 41 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes

❗ PHY 112: General Physics (SCIT OR SQ)	3	C	
PHY 114: General Physics Laboratory (SCIT OR SQ)	1	C	
Humanities, Arts and Design (HUAD)	3		
❗ Complete First-Year Composition requirement.			
Complete Mathematics (MATH) requirement.			
Term hours subtotal:	7		
Term 4 - A 41 - 47 Credit Hours Critical course signified by ❗	Hours	Minimum Grade	Notes
❗ CHM 233: General Organic Chemistry I	3	C	
Sustainability (SUST)	3		
Term hours subtotal:	6		<ul style="list-style-type: none"> Register for a Handshake account and participate in virtual career advising. Create a first draft resume.
Term 4 - B 47 - 53 Credit Hours	Hours	Minimum Grade	Notes
CHM 234: General Organic Chemistry II	3	C	
Governance and Civic Engagement (CIVI)	3		
Term hours subtotal:	6		<ul style="list-style-type: none"> Plan for in-person laboratory attendance in summer. Talk with your academic advisor.
Summer 4 53 - 55 Credit Hours Critical course signified by ❗	Hours	Minimum Grade	Notes
❗ CHM 237: General Organic Chemistry Laboratory I	1	C	
CHM 238: General Organic Chemistry Laboratory II	1	C	
Term hours subtotal:	2		<ul style="list-style-type: none"> ASU Online students will complete all experiments for the Organic Chemistry labs at the ASU Tempe campus during a one-week session in summer. Lab reports will be completed in subsequent weeks during the same summer term.
Term 5 - A 55 - 62 Credit Hours Necessary course signified by ⭐	Hours	Minimum Grade	Notes
⭐ BIO 181: General Biology I (SCIT OR SQ)	4	C	
Global Communities, Societies and Individuals (GCSI)	3		
Term hours subtotal:	7		<ul style="list-style-type: none"> Consider applying for a Pre-Health Internship to gain hands-on clinical experience. For other types of internship opportunities, students can go to Handshake or connect with an academic advisor to discuss options.
Term 5 - B 62 - 69 Credit Hours	Hours	Minimum Grade	Notes
BIO 182: General Biology II (SCIT OR SG)	4	C	
Science and Society Elective	3	C	
Term hours subtotal:	7		
Term 6 - A 69 - 75 Credit Hours Necessary course signified by ⭐	Hours	Minimum Grade	Notes
⭐ BCH 341: Physical Chemistry with a Biological Focus	3	C	
American Institutions (AMIT)	3		
Term hours subtotal:	6		
Term 6 - B 75 - 81 Credit Hours	Hours	Minimum Grade	Notes
BCH 463: Biophysical Chemistry	3	C	
Upper Division Elective	3		
Term hours subtotal:	6		

Term 7 - A 81 - 87 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BCH 461: General Biochemistry	3	C	
Upper Division Elective	3		
Term hours subtotal:	6		
Term 7 - B 87 - 93 Credit Hours	Hours	Minimum Grade	Notes
BCH 462: General Biochemistry	3	C	
Upper Division Elective	3		
Term hours subtotal:	6		<ul style="list-style-type: none"> View career webinars offered by the Career and Professional Development Center.
Term 8 - A 93 - 99 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Upper Division Advanced BIO Elective	3		
Upper Division Elective	3		
Term hours subtotal:	6		
Term 8 - B 99 - 105 Credit Hours	Hours	Minimum Grade	Notes
Advanced BIO Elective	3-4	C	
Upper Division Elective	3		
Term hours subtotal:	6-7		<ul style="list-style-type: none"> Plan for in-person laboratory attendance in summer. Talk with your academic advisor.
Summer 8 105 - 108 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BCH 467: Analytical Biochemistry Laboratory (L)	3	C	
Term hours subtotal:	3		<ul style="list-style-type: none"> ASU Online students will complete all experiments for the Analytical Biochemistry lab at the ASU Tempe campus during a one-week session in summer. Lab reports will be completed in subsequent weeks during the same summer term.
Term 9 - A 108 - 114 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BCH OR CHM Upper Division Elective	3	C	
Upper Division Elective	3		
Term hours subtotal:	6		<ul style="list-style-type: none"> Upper Division BCH or CHM Elective cannot be met with BCH 361, BCH 367, BCH 371, BCH 372, BCH 373, CHM 341, CHM 460, or CHM 480. Talk with your academic advisor for options.
Term 9 - B 114 - 120 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Science and Society Elective	3	C	
Upper Division Elective	3		
Term hours subtotal:	6		<ul style="list-style-type: none"> Apply for full-time career opportunities.

- 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.

- With prior approval of an academic advisor in the School of Molecular Sciences, other courses may be used to satisfy the Advanced BIO Elective requirement.

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

Advanced BIO Elective

BIO 201: Human Anatomy and Physiology I
(SCIT OR SG)

BIO 202: Human Anatomy and Physiology
II (SCIT OR SG)

BIO 340: General Genetics

BIO 351: Developmental Biology

BIO 353: Cell Biology

BIO 360: Animal Physiology

MIC 205: Microbiology (SCIT OR SG)

MIC 206: Microbiology Laboratory (SCIT
OR SG)

MIC 220: Biology of Microorganisms

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum
- [University Undergraduate Graduation Requirements](#)

Notes:

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.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 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.