

2022 - 2023 Major Map



Biochemistry, BA



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




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	Hours	Minimum Grade	Notes
ASU 101-LA: The ASU Experience	1		
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. Select your Career Interest Areas and play me3@ASU. Due to lower-division prerequisites, pre-health students are encouraged to choose upper-division General Studies (HU or SB) courses.
Social-Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Term hours subtotal:	7		



Term 1 - B 7 - 13 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 251: Calculus for Life Sciences (MA)	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	<ul style="list-style-type: none"> View ASU Online first-year student registration information here.
Term hours subtotal:	6		




Term 2 - A 13 - 21 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 113: General Chemistry I (SQ)	4	C	
Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	<ul style="list-style-type: none"> ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Research the timeline for health careers and professional program admissions preparation.
Term hours subtotal:	8		




Term 2 - B 21 - 29 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 116: General Chemistry II (SQ)	4	C	
Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			



Term hours subtotal: 8



Term 3 - A 29 - 37 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 PHY 101: Introduction to Physics (SQ)	4	C	<ul style="list-style-type: none"> Research admission requirements for health-related professional schools. Students who are interested in graduate degrees in natural sciences or health-related professional degrees should take PHY 111 and PHY 113 instead of PHY 101 in this term. Then, complete PHY 112 and PHY 114 in the next term.
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Term hours subtotal:	8		

Term 3 - B 37 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Computer/Statistics/Quantitative Applications (CS)	3		
 Complete First-Year Composition requirement.			
Complete Mathematics (MA) requirement.			
Term hours subtotal:	7		

Term 4 - A 44 - 51 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SQ)	4	C	<ul style="list-style-type: none"> Connect with a career advisor by registering for a Handshake account.
 CHM 233: General Organic Chemistry I	3	C	
Term hours subtotal:	7		

Term 4 - B 51 - 58 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 234: General Organic Chemistry II	3	C	
BIO 182: General Biology II (SG)	4	C	
 Complete PHY 101 OR PHY 112 AND PHY 114 course(s).			
Term hours subtotal:	7		

Summer 4 58 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 237: General Organic Chemistry Laboratory I	1	C	<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.
CHM 238: General Organic Chemistry Laboratory II	1	C	
Term hours subtotal:	2		

Term 5 - A 60 - 66 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 BCH 341: Physical Chemistry with a Biological Focus	3	C	<ul style="list-style-type: none"> Create a first draft resume.
Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		
Term hours subtotal:	6		

Term 5 - B 66 - 72 Credit Hours	Hours	Minimum Grade	Notes
Social-Behavioral Sciences (SB) AND Global Awareness (G)	3		<ul style="list-style-type: none"> Explore internship opportunities in industry and health fields.
Upper Division Elective OR BCH 484: Internship	3		

Term hours subtotal: 6

Term 6 - A 72 - 78 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ CHM 325: Analytical Chemistry	3	C	
Humanities, Arts and Design (HU)	3		
Term hours subtotal:	6		

Term 6 - B 78 - 84 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
Advanced BIO Elective	3-4	C	
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:	6-7		

Term 7 - A 84 - 93 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BCH OR CHM Upper Division Elective	3	C	
Complete 2 courses:	6		
Upper Division Elective			
Term hours subtotal:	9		<ul style="list-style-type: none"> Consider taking BCH 463 as the BCH OR CHM Upper Division Elective in this term.

Term 7 - B 93 - 102 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)	3		
Literacy and Critical Inquiry (L)	3		
Upper Division Elective	3		
Term hours subtotal:	9		

Term 8 - A 102 - 108 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BCH OR CHM Upper Division Elective	3	C	
BCH 461: General Biochemistry	3	C	
Term hours subtotal:	6		<ul style="list-style-type: none"> Apply for full-time career opportunities. Consider taking CHM 394 or CHM 433 for the BCH OR CHM Upper Division Elective in this term for session A.

Term 8 - B 108 - 114 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"> Consider taking CHM 453 for the Upper Division Elective in this term for session B.

Summer 8 114 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BCH 467: Analytical Biochemistry Laboratory (L)	3	C	
Upper Division Elective	3		
Term hours subtotal:	6		<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.

- 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 (SG)

BIO 340: General Genetics

BIO 351: Developmental Biology

BIO 353: Cell Biology

BIO 360: Animal Physiology

MIC 205: Microbiology (SG)

MIC 206: Microbiology Laboratory (SG)

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.