

## 2024 - 2025 Major Map

### Biochemistry, BA

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

Term 1 0 - 14 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
CHM 117: General Chemistry for Majors I (SCIT OR SQ) AND ⚠ CHM 111: General Chemistry Laboratory for Majors I (SCIT OR SQ) OR CHM 113: General Chemistry I (SCIT OR 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>Students placing into lower level math classes can still graduate in 4 years -- see an academic advisor for planning.</li> <li>Students considering advanced science degrees and those who plan to take advanced math courses should take MAT 270 in place of MAT 251.</li> <li>Select your <b>Career Interest Areas</b> and play <b>me3@ASU</b>.</li> <li>CHM 117 and CHM 111 are introductory courses created specifically for students in the Biochemistry or Chemistry majors. Students are strongly encouraged to select these course options.</li> </ul>
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		
MAT 251: Calculus for Life Sciences (MATH OR MA) OR MAT 265: Calculus for Engineers I (MATH OR MA) OR MAT 270: Calculus with Analytic Geometry I (MATH OR MA)	3-4	C	
Social and Behavioral Sciences (SOBE)	3		
Term hours subtotal:	14-15		
Term 2 14 - 29 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ BIO 181: General Biology I (SCIT OR SQ)	4	C	<ul style="list-style-type: none"> <li><b>ASU Language Placement:</b> Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned.</li> <li>Research the <b>timeline</b> for health careers and professional program admissions requirements.</li> <li>CHM 118 and CHM 112 are introductory courses created specifically for students in the Biochemistry or Chemistry majors. Students are strongly encouraged to select these course options.</li> </ul>
CHM 118: General Chemistry for Majors II (SCIT OR SQ) AND ⚠ CHM 112: General Chemistry Laboratory for Majors II (SCIT OR SQ) OR CHM 116: General Chemistry II (SCIT OR SQ)	4	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	
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:	15		
Term 3 29 - 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"> <li>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.</li> </ul>
⚠ CHM 237: General Organic Chemistry Laboratory I	1	C	
⚠ PHY 101: Introduction to Physics (SCIT OR SQ)	4	C	
BIO 182: General Biology II (SCIT OR SG)	4	C	

Second Language: Requirement satisfied through the following: 4 C  
 \* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.

❖ Complete First-Year Composition requirement.

❖ Complete Mathematics (MATH) requirement.

Term hours subtotal: 16

Term 4 45 - 59 Credit Hours <b>Critical course signified by</b> ❖	Hours	Minimum Grade	Notes
---	-------	---------------	-------

❖ CHM 234: General Organic Chemistry II 3 C

CHM 238: General Organic Chemistry Laboratory II 1 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

Humanities, Arts and Design (HUAD) 3

Quantitative Reasoning (QTRS) 3

❖ Complete PHY 101 OR PHY 112 AND PHY 114 course(s).

Term hours subtotal: 14

Term 5 59 - 75 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
--	-------	---------------	-------

★ BCH 341: Physical Chemistry with a Biological Focus 3 C

BCH 461: General Biochemistry 3 C

CHM 302: Environmental Chemistry OR CHM 325: Analytical Chemistry 3 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

Upper Division Elective 3

Term hours subtotal: 16

- Connect with a Career Advisor by registering for a **Handshake** account.
- Create a first draft **resume**.

- CHM 302 is only offered in the Fall semester and must be completed at the Tempe campus.
- CHM 325 must be completed at the Tempe campus.
- 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 6 75 - 90 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
--	-------	---------------	-------

★ BCH 462: General Biochemistry 3 C

BIO 312: Bioethics (HUAD OR HU) OR BIO 316: History of Biology: Conflicts and Controversies (HUAD OR H) OR BIO 317: History of Science II (HUAD OR HU & H) OR BIO 318: History of Medicine (HUAD OR HU & H) 3-4 C

Governance and Civic Engagement (CIVI) 3

Sustainability (SUST) 3

Upper Division Elective 3

Term hours subtotal: 15-16

- This is an ideal semester to **study abroad**. BCH 462 may be taken in the final two terms.

Term 7 90 - 105 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
---	-------	---------------	-------

★ BCH 467: Analytical Biochemistry Laboratory (L) 3 C

BCH OR CHM Upper Division Elective 3 C

American Institutions (AMIT) 3

Global Communities, Societies and Individuals (GCSI) 3

Upper Division Elective OR BCH 484: Internship 3

Term hours subtotal: 15

- Upper Division BCH or CHM Electives must be completed at Tempe campus and cannot be met with BCH 361, BCH 367, BCH 371, BCH 372, BCH 373, CHM 341, CHM 460, or CHM 480.

Term 8 105 - 120 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
--	-------	---------------	-------

★ BCH OR CHM Upper Division Elective	3	C
<hr/>		
Complete 4 courses:	12	
Upper Division Elective		
<hr/>		
Term hours subtotal:	15	

- Apply for full-time career opportunities

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

- **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.