
















# 2012 - 2013 Major Map



## Biochemistry (Medicinal Chemistry), BS

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

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 OR CHM 113: General Chemistry I (SQ)	4	C	<ul style="list-style-type: none"> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses</li> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> <li>ASU 101 or College specific equivalent First Year Seminar required of all freshman students.</li> </ul>
 MAT 270: Calculus with Analytic Geometry I (MA)	4	C	
CHM 191: Chemistry Topics OR LIA 194: Intro to Liberal Arts and Sciences	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social-Behavioral Sciences (SB) AND Global Awareness (G) OR Social-Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Term hours subtotal:		15	
Term 2 15 - 30 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4	C	
 CHM 118: General Chemistry for Majors II (SQ) AND CHM 112: General Chemistry Laboratory for Majors II OR CHM 116: General Chemistry II (SQ)	4	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
MAT 271: Calculus with Analytic Geometry II (MA)	4	C	
 Complete CHM 117 AND CHM 111 OR CHM 113 course(s).			
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
 Complete MAT 170 OR MAT 270 course(s).			
Term hours subtotal:		15	
Term 3 30 - 45 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 CHM 333: Organic Chemistry for Majors I OR CHM 233: General Organic Chemistry I	3	C	

	CHM 337: Organic Chemistry Laboratory for Majors I OR CHM 237: General Organic Chemistry Laboratory I	1	C
	PHY 111: General Physics (SQ)	3	C
	BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4	C
	PHY 113: General Physics Laboratory (SQ)	1	C
	Computer/Statistics/Quantitative Applications (CS)	3	
	Complete CHM 116 CHM 118 CHM 112 MAT 270 PHY 111 course(s).		
Term hours subtotal:		15	

Term 4 45 - 60 Credit Hours 	Hours	Minimum Grade	Notes
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	PHY 112: General Physics (SQ)	3	C
	PHY 114: General Physics Laboratory (SQ)	1	C
	CHM 334: Organic Chemistry for Majors II OR CHM 234: General Organic Chemistry II	3	C
	CHM 338: Organic Chemistry Laboratory for Majors II OR CHM 238: General Organic Chemistry Laboratory II	1	C
	Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social-Behavioral Sciences (SB) AND Global Awareness (G) OR Social-Behavioral Sciences (SB) AND Historical Awareness (H)	3	
	Elective	4	
	Complete CHM 233, CHM 333, CHM 237, CHM 337, BIO 181, BIO 182, PHY 112 course(s).		
Term hours subtotal:		15	

Term 5 60 - 75 Credit Hours	Hours	Minimum Grade	Notes
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BCH 461: General Biochemistry	3	C
BIO 353: Cell Biology	3	C
CHM 341: Elementary Physical Chemistry	3	C
CHM 343: Physical Chemistry Laboratory	1	C
Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Arts and Design (HU) AND Global Awareness (G) OR Humanities, Arts and Design (HU) AND Historical Awareness (H)	3	
Upper Division Elective	2	
Term hours subtotal:	15	

- CHM 234 and CHM 341 are co- or pre-requisites for most advanced CHM and BCH courses

Term 6 75 - 90 Credit Hours	Hours	Minimum Grade	Notes
BCH 462: General Biochemistry	3	C	
BCH 463: Biophysical Chemistry	3	C	
BCH 467: Analytical Biochemistry Laboratory (L)	3	C	
Upper Division CLAS Science and Society Elective	3	C	
Humanities, Arts and Design (HU)	3		
Term hours subtotal:	15		

Term 7 90 - 105 Credit Hours	Hours	Minimum Grade	Notes
CHM 433: Advanced Organic Chemistry I	3	C	
Upper Division CLAS Science and Society Elective	3	C	
Literacy and Critical Inquiry (L)	3		
Upper Division Elective	3		
Elective	3		
Term hours subtotal:	15		

Term 8 105 - 120 Credit Hours	Hours	Minimum Grade	Notes
CHM 435: Medicinal Chemistry	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	3		
Elective	3		
Term hours subtotal:	15		

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

**Notes:**

All students pursuing a B.S. or B.S.P. degree in the College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at <https://clas.asu.edu/scienceandsociety>. At least one of the two courses must be upper division. Students must earn a C or better in the courses, and no more than one of the two can also be used to simultaneously fill a requirement of the major, minor or related area. Science and Society courses cannot also be used to fill the general studies HU, SB, SQ or SG requirements.

**Total Hours:** 120

**Upper Division Hours:** 45 minimum

**Major GPA:** 2.50 minimum

**Cumulative GPA:** 2.50 minimum

**Total hrs at ASU:** 30 minimum

**Hrs Resident Credit for**

**Academic Recognition:** 56 minimum

**Total Community College Hrs:** 64 maximum

**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 2012 - 2013 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.