

**2002-2003**  
**BIOCHEMISTRY MAJOR – BACHELOR OF SCIENCE DEGREE**  
**DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY**

<b>MAJOR REQUIREMENTS</b>	<b>ALTERNATIVE SEQUENCE</b>
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Course	Title	Hrs	Tr	UD
CHM 117	General Chem Majors	4		
CHM 118	Gen Chem Majors	4		
CHM 317	Organic Chem Majors	3		
CHM 319	Org Chem Lab Majors I			
CHM 318	Org Chem Majors II	3		
CHM 320	Org Chem Lab Maj II	1		
CHM 341	Elem Physical Chem	3		
BCH 461	Gen Biochemistry	3		
BCH 462	Gen Biochemistry	3		
BCH 463	Biophysical Chem	3		
BCH 464	Biophy Chem Lab	2		
BCH 467	Analy Biochem Lab	3		
CHM/BCH elective/ list		3		

Course	Title	Hrs	Tr	UD
CHM 113	General Chem	4		
CHM 115	Gen Chem (or 116)	5		
CHM 331	Gen Organic Chem	3		
CHM 335	Gen Org Chem Lab	1		
CHM 332	Gen Organic Chem	3		
CHM 336	Gen Org Chem Lab	1		

Electives: BCH 392, 494 (Protein), 494 (Nucleic Acid)  
 CHM 325, 327, 424, 431, 453, 471, 481, 485

**Related Courses**

BIO 187	Gen Biology I	4		
BIO 188	Gen Biology II	4		
BIO 340	Gen Genetics	4		
BIO 353	Cell Biology	3		
MAT 270	Calculus w/Geom. I	4		
MAT 271	Calculus w/Geom. II	4		
PHY 111	General Physics	3		
PHY 113	General Physics Lab	1		
PHY 112	General Physics	3		
PHY 114	General Physics Lab	1		

Major must include minimum of 67 hours, 12 hours upper division at ASU, "C" minimum in all upper division courses

<b>UNIVERSITY GENERAL STUDIES</b>	<b>COLLEGE OF LIBERAL ARTS &amp; SCIENCES</b>
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**First Year Comp** ("C" minimum) \_\_\_\_\_  
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**Literacy/Critical Inquiry (L)** \_\_\_\_\_  
**Literacy/Critical Inquiry** (upper division satisfied by major)  
**Mathematical Studies (CS)** \_\_\_\_\_

**Mathematical Studies (MA)** (satisfied by major)

**Humanities/Fine Art (HU)**  
 (6-9 hours, HU and SB must total 15 hours)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Social Behavioral Sciences (SB)**  
 (6-9 hours, one HU or SB must be upper division)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**HU and SB Awareness Areas** (must cover all three)  
 Cultural (C) \_\_\_\_\_ Global (G) \_\_\_\_\_ Historical (H) \_\_\_\_\_

**Second Language** \_\_\_\_\_  
 (proficiency through intermediate level, "C" min.)

**Humanities** (6 hours, upper division, choose from:  
 AFH, CSH, ENG, HPS, HUM, PHI, REL, WSH)  
*All second language literature or civilization courses.*  
*Can NOT double count with University General Studies.*

**Social Behavioral Sciences** (6 hours, upper division  
 choose from: AFS, ASB, CSS, ECN, GCU, HST/HIS  
 PGS, POS, SOC, WST **except for WST 413, 464 and 470**)  
*Can NOT double count with University General Studies.*

**Bridge Course** (see <http://clasdean.la.asu.edu/student/resources/>)

**Natural Science/Mathematics** (satisfied by major)

**Required: 120 total hours, 45 upper division hours, 30 hours in residence at ASU, 2.00 minimum GPA**

The schedule presented below is a model program of study that includes all the departmental requirements for courses in chemistry and related subjects. It presents a sequence that accommodates prerequisites for the required courses. Students and advisers should recognize that the order of courses in this outline is a model program and many other plans will work as well.

Year 1

Semester (Fall)	hrs.	Semester (Spring)	hrs.
CHM 117 General Chem. - Majors	4	CHM 118 General Chem. - Majors	4
MAT 270 Calculus w/Geom. I	4	MAT 271 Calculus w/Geom. II	4
ENG 101 First-year Comp.	3	ENG 102 First-year Comp.	3
		BIO 187 General Biology I	4
*Non-major	<u>4-6</u>	*Non-major	<u>4</u>
	15-17		15

Year 2

Semester (Fall)	hrs.	Semester (Spring)	hrs.
BIO 188 General Biology II	4	BIO 340 General Genetics	4
CHM 317 Organic Chem. - Majors	3	CHM 318 Organic Chem. - Majors	3
CHM 319 Org. Chem. Lab - Majors	1	CHM 320 Org. Chem. Lab Majors	1
PHY 111 General Physics	3	PHY 112 General Physics	3
PHY 113 General Physics Lab	1	PHY 114 General Physics Lab	1
*Non-major	<u>3-5</u>	*Non-major	<u>3-5</u>
	15-17		15-17

Year 3

Semester (Fall)	hrs.	Semester (Spring)	hrs.
BIO 353 Cell Biology	3	BCH 462 General Biochemistry	3
CHM 341 Elem. Physical Chem.	3	BCH 463 Biophysical Chem.	3
BCH 461 General Biochemistry	3	BCH 467 Analytical Biochem. Lab	3
*Non-major	<u>6-8</u>	*Non-major	<u>6-8</u>
	15-17		15-17

Year 4

Semester (Fall)	hrs.	Semester (Spring)	hrs.
BCH 464 Biophysical Chem. Lab	2	@CHM/BCH elective	3
*Non-major	<u>13-15</u>	*Non-major	<u>12-14</u>
	15-17		15-17

\* Non-major courses: Courses that satisfy university general studies and College of Liberal Arts and Sciences graduation requirements and any other interests the student chooses to pursue.

@ May be taken any semester to complete the chemistry hours requirement. NOTE: only 3 hrs. of credit for CHM/BCH elective is required.