

BIOCHEMISTRY MAJOR (2020 Catalog)  
Bachelor of Science Degree – ACS Certified  
 126 Semester Hours Minimum

Name \_\_\_\_\_

Campus Address \_\_\_\_\_ Phone \_\_\_\_\_

Second Major \_\_\_\_\_ Minor 1 \_\_\_\_\_ Minor 2 \_\_\_\_\_

Transferred \_\_\_\_\_ credits from \_\_\_\_\_ Advisor \_\_\_\_\_

**Chemistry Courses**

CHEM 1110	General Chemistry I	4	_____
CHEM 1120	General Chemistry II	4	_____
	OR		
CHEM 1130	Gen. Chemistry I-II	5	_____
CHEM 2010	Chemical Safety	1	_____
CHEM 2110	Descriptive Inorg Chem	4	_____
CHEM 2210	Organic Chemistry I	3	_____
CHEM 2220	Organic Chemistry II	3	_____
CHEM 2230	Organic Chem. Lab	2	_____
CHEM 2310	Chromatog. and Quant.	4	_____
CHEM 4310	Instrumental Analysis	4	_____
	OR		
CHEM4220	Organic Struct. Analysis	3	_____
CHEM 4420	Physical Chemistry I	3	_____
CHEM 4430	Physical Chemistry II	3	_____
CHEM 4440	Physical Chem. Lab	2	_____
CHEM 4510	Biochemistry I	3	_____
CHEM 4520	Biochemistry II	3	_____
CHEM 4530	Biochemistry Lab	2	_____
CHEM 3600	Undergrad Research	2	_____

**Elective**

3000 or 4000 level BIOL or CHEM course 3-4 \_\_\_\_\_

**Biology Courses**

BIOL 2052	General Biology: Cell Structure and Function	4	_____
BIOL 3140	Genetics	4	_____

**Math and Physics Courses**

MATH 1420	Calculus I	4	_____
MATH 1421	Calculus II	4	_____
PHYSICS 1701	Physics I	4	_____
PHYSICS 1702	Physics II	4	_____
	OR		
PHYSICS 1511	General Physics I	4	_____
PHYSICS 1512	General Physics II	4	_____

**Liberal Arts Core**

<b>Category 1: Core Competencies</b>	<b>(12 hrs)</b>
_____ A. Reading and Writing	3 hrs
_____ B. Speaking and Listening	3 hrs
<u>  x  </u> C. Quantitative Techniques	3 hrs
	Satisfied by MATH 1420 4 hrs
_____ D. Dimensions of Wellbeing	2 hrs

**Category 2: Civilizations and Cultures (9 hrs)**

_____ A. Humanities (take 2 of I, II, and III)	3 hrs
_____	3 hrs
_____ B. Non-Western Cultures	3 hrs

**Category 3: Fine Arts, Literature, Philosophy and Religion (6 hrs)**

_____ A. Fine Arts	3 hrs
_____ B. Lit, Philosophy, or Religion	3 hrs

**Category 4: Natural Science and Technology (7 hrs)**

<u>  x  </u> A. Life Sciences	3 hrs
	Satisfied by BIOL 2052
<u>  x  </u> B. Physical Sciences	4 hrs
	Satisfied by CHEM 1110 or CHEM 1130

**Category 5: Social Science (9 hrs)**

_____ A. Soc. & Historical Perspectives	3 hrs
_____ B. Individual & Institutional Perspectives	3 hrs
_____ C. Diversity and Global Issues	3 hrs

**Category 6: Capstone (2 hrs)**

\_\_\_\_\_ Capstone

**10 hours satisfied  
34 hours needed**

NOTE: If CHEM4220 is taken in place of CHEM4310 a 4 hr elective must be taken.

**Total: 71-74 hours**

SAMPLE PLAN OF STUDY FOR THE B.S. BIOCHEMISTRY MAJOR (ACS-CERTIFIED)

An average of 15.75 credits per semester is needed to graduate in 8 semesters

FRESHMAN YEAR

<u>FALL</u>			<u>SPRING</u>		
CHEM 1110	General Chemistry I	4	CHEM 1120	General Chemistry II	4
MATH 1420	Calculus I	4	MATH 1421	Calculus II	4
BIOL 2052	General Biology:			Liberal Arts	<u>9</u>
	Cell Structure and Function	4			17
	Liberal Arts	<u>3</u>			
		15			

SOPHOMORE YEAR

<u>FALL</u>			<u>SPRING</u>		
CHEM 2210	Organic Chemistry I	3	CHEM 2220	Organic Chemistry II	3
PHYSICS 1701	Physics I	4	CHEM 2230	Organic Chemistry Laboratory	2
CHEM 2310	Chromatog. and Quant. Analysis	4	CHEM 2010	Chemical Safety	1
	Liberal Arts	<u>6</u>	PHYSICS 1702	Physics II	4
		17	BIOL 3140	Genetics	4
				Liberal Arts	<u>3</u>
					17

JUNIOR YEAR

<u>FALL</u>			<u>SPRING</u>		
CHEM 2110	Descriptive Inorganic Chemistry	4	CHEM 4430	Physical Chemistry II	3
CHEM 4420	Physical Chemistry I	3	CHEM 4520	Biochemistry II	3
CHEM 4510	Biochemistry I	3	CHEM 4530	Biochemistry Laboratory	2
	Liberal Arts/Electives	<u>5</u>		Liberal Arts/ Electives	<u>6</u>
		15			14

SENIOR YEAR

<u>FALL</u>			<u>SPRING</u>		
CHEM 4310	Instrumental Analysis	4	CHEM 4440	Physical Chemistry Laboratory	2
CHEM 3600	Undergraduate Research	1	CHEM 3600	Undergraduate Research	1
3000/4000 level	BIOL or CHEM Elective	3		Liberal Arts/Electives	<u>12</u>
	Liberal Arts/Electives	<u>8</u>			15
		16			

Total Hours

Liberal Arts	34 hours
Major	71-74 hours
University Electives/Minor	<u>18-21 hours</u>
	126 hours minimum

ADVISING NOTE: This is a sample plan of study only. There are a variety of alternative schedules for completing the B.S. Biochemistry. Please consult with an advisor in the Department of Chemistry and Biochemistry to plan a schedule tailored for your needs.