

BIOCHEMISTRY MAJOR (2018 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 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 4010 Chemical Safety 1 _____
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

Category I: Core Competencies (12 hrs)

_____ A. Reading and Writing 3 hrs
_____ B. Speaking and Listening 3 hrs
 x 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
_____ 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)

 x A. Life Sciences 3 hrs
Satisfied by BIOL 2052
 x 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	PHYSICS 1702	Physics II	4
	Liberal Arts	<u>6</u>	BIOL 3140	Genetics	4
		17		Liberal Arts	<u>3</u>
					16

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>	CHEM 4010	Chemical Safety	1
		15		Liberal Arts/ Electives	<u>6</u>
					15

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.