

B.S. Biochemistry Four-Year Sample Curriculum 2024-2025

Requirements subject to change. See UI Catalog for complete degree requirements and additional information. Updated 3/14/24.

1 st Year – Fall Semester			1 st Year – Spring Semester		
BIOL 101	Opportunities in Biological Sciences	1	BIOL 115/115L	Cells & the Evolution of Life & Lab <i>Prereq:</i> CHEM 101 or CHEM 111 <u>minimum 'C' required to graduate</u>	4
BIOL 114	Organisms and Environments <u>minimum 'C' required to graduate</u>	4	CHEM 112/112L	Principles of Chemistry II & Lab <i>Prereq:</i> Chem 111/111L	5
CHEM 111/111L	Principles of Chemistry I & Lab <i>Prereq:</i> math test or min 'C' in CHEM 101, MATH 143 or 170	4	MATH 175	Analytic Geometry and Calculus II <i>Prereq:</i> min 'C' in MATH 170	4
MATH 170	Analytic Geometry and Calculus I <i>Prereq:</i> math test or min 'C' in MATH 143 and MATH 144 (co-req possible).	4		General Education Course/Elective	3
ENGL 102	College Writing and Rhetoric <i>Prereq:</i> ENGL 101 or test scores	3			
Total Credits			Total Credits		
16			16		
2 nd Year – Fall Semester			2 nd Year – Spring Semester		
CHEM 253/254 <i>(253 Fall only)</i>	Quantitative Analysis & Lab <i>Prereq:</i> CHEM 112/112L	5	STAT 251 or #STAT 301	Statistical Methods or Probability & Statistics <i>Prereq:</i> MATH 108, 137, 143, 160, or 170; MATH 175 for STATS 301	3
CHEM 277/278	Organic Chemistry I & Lab <i>Prereq:</i> CHEM 112/112L	4	CHEM 372 <i>(Spring only)</i>	Organic Chemistry II <i>Prereq:</i> CHEM 277	3
PHYS 211/211L	Engineering Physics I & Lab <i>Prereq:</i> MATH 170	4	PHYS 212/212L	Engineering Physics II & Lab <i>Prereq:</i> PHYS 211/211L and MATH 175	4
	General Education Course/Elective	3		General Education Course/Elective	3
				Elective as needed** (see below)	3
Total Credits			Total Credits		
16			16		
3 rd Year – Fall Semester			3 rd Year – Spring Semester		
BIOL 310/315 <i>(Fall only)</i>	Genetics & Lab <i>Prereq:</i> BIOL 115/115L or BIOL 250	4	BIOL 312/313 <i>(Spring only)</i>	Molecular and Cellular Biology & Lab <i>Prereq:</i> BIOL 115/115L and BIOL 310/315 or GENE 314 or BIOL 250	4
BIOL 380/382 <i>(Fall only)</i>	Biochemistry I <i>Prereq:</i> CHEM 112/112L and CHEM 277	6	BIOL 454 <i>(Spring only)</i>	Biochemistry II <i>Prereq:</i> CHEM 372; BIOL 380 or CHEM 302 or 306	3
ENGL 202 or 207 or 208 or 317 or 318 or 320	Writing <i>Prereq:</i> ENGL 102; 202, Soph. stand.; 317, 318, Junior stand.	3		General Education Course/Elective	3
				General Education Course/Elective	3
				General Education Course/Elective	3
Total Credits			Total Credits		
13			16		
4 th Year – Fall Semester			4 th Year – Spring Semester		
*see below	Biochemistry Elective	3	BIOL 400	Seminar	1
CHEM 302 or **CHEM 305 <i>(both Fall only)</i>	Principles of Physical Chemistry or Physical Chemistry <i>Prereq:</i> CHEM 112, MATH 170 or 175 and PHYS 111/111L (PPC); CHEM 112/ 112L, MATH 275 and PHYS 212 (PC)	3	Capstone Experience	BIOL 401 or BIOL 407 or BIOL 408 <i>(Fall or Spring)</i> or BIOL 411 <i>(Spring only)</i>	2
	General Education Course/Elective	3	*see below	Biochemistry Elective	3
	General Education Course/Elective	3		General Education Course/Elective	3
	General Education Course/Elective	3		General Education Course/Elective	3
Total Credits			Total Credits		
15			12		

***Biochemistry Electives:** Immunology, Genomics, Neurobiology, Protein Structure and Function, Prokaryotic Molecular Biology, Cellular and Molecular Basis of Disease, Organic Chemistry II Lab, Medicinal Chemistry, Intermediate Organic Chemistry, Genetic Engineering, Bioremediation, Systems Biology, Principals of Physical Chemistry, Physical Chemistry, Physical Chemistry II; Advanced Laboratory Techniques

Additional classes can be substituted with prior approval from advisor and chairperson.

#STAT 301 not required but encouraged