

# B.S. Biochemistry Four-Year Sample Curriculum 2022-2023

Requirements subject to change. See UI Catalog for complete degree requirements and additional information. Updated 5/26/22.

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

**\*Biochemistry Electives:** Immunology, Genomics, Neurobiology, Protein Structure and Function, Prokaryotic Molecular Biology, Eukaryotic Molecular Genetics, Organic Chemistry II Lab, Medicinal Chemistry, Intermediate Organic Chemistry, Instrumental Analysis, Genetic Engineering

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

#STAT 301 not required but encouraged

\*\*Math 275 is encouraged as an elective as the prerequisite for CHEM 305