

# B.S. and B.A. Biology 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 <sup>st</sup> Year – Fall Semester			1 <sup>st</sup> 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 minimum 'C' required to graduate	4
BIOL 114	Organisms and Environments <i>minimum 'C' required to graduate</i>	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	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
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			
	<b>Total Credits</b>	<b>16</b>		<b>Total Credits</b>	<b>15</b>
2 <sup>nd</sup> Year – Fall Semester			2 <sup>nd</sup> Year – Spring Semester		
BIOL 310/315 <i>(Fall only)</i>	Genetics & Lab <i>Prereq:</i> BIOL 115/115L or BIOL 250	4	BIOL 213 <i>(Spring only)</i>	Principles of Biological Structure and Function <i>Prereq:</i> BIOL 114 or BIOL 115/BIOL 115L	4
CHEM 277/278	Organic Chemistry I & Lab <i>Prereq:</i> CHEM 112/112L	4	BIOL 314 <i>(Spring only)</i>	Ecology and Population Biology <i>Prereq:</i> BIOL 114 and BIOL 115/115L; STAT 251 or STAT 301; and MATH 160 or MATH 170	4
PHYS 111/111L or PHYS 211/211L	General Physics I & Lab or Engineering Physics I & Lab <i>Prereq:</i> MATH 143 (GP); MATH 170 (EP)	4	PHYS 112/112L <i>(Spring only)</i> or PHYS 212/212L	General Physics II & Lab or Eng. Physics II & Lab <i>Prereq:</i> PHYS 111/111L (GP); PHYS 211/211L and MATH 175 (EP)	4
	General Education Course/Elective	3		General Education Course/Elective	3
	<b>Total Credits</b>	<b>15</b>		<b>Total Credits</b>	<b>15</b>
3 <sup>rd</sup> Year – Fall Semester			3 <sup>rd</sup> Year – Spring Semester		
BIOL 300 or BIOL 380 <i>(both Fall only)</i>	Survey of Biochemistry or Biochemistry I <i>Prereq:</i> CHEM 275 or 277 (SB); CHEM 112/112L and CHEM 277 (BI)	3	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
*see below	Upper Division Biology Elective	3	*see below	Upper Division Biology Elective	3
ENGL 202 or 207 or 208 or 317 or 318 or 320	Writing Course <i>Prereq:</i> ENGL 102; Soph. stand. 320; Junior stand.317,318	3		Upper Division Biology Elective	3
	General Education Course/Elective	3		General Education Course/Elective	3
	General Education Course/Elective	3		General Education Course/Elective	3
	<b>Total Credits</b>	<b>15</b>		<b>Total Credits</b>	<b>16</b>
4 <sup>th</sup> Year – Fall Semester			4 <sup>th</sup> Year – Spring Semester		
*see below	Upper Division Biology Elective	3	BIOL 400	Seminar	1
	Upper Division Biology Elective	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	BIOL 421 <i>(Spring only)</i>	Advanced Evolution <i>Prereq:</i> One of BIOL 310 or BIOL 314	3
	General Education Course/Elective	3	*see below	Upper Division Biology Elective	4
	General Education Course/Elective	3		General Education Course/Elective	3
				General Education Course/Elective	3
	<b>Total Credits</b>	<b>15</b>		<b>Total Credits</b>	<b>16</b>

**B.A. students** use their electives to complete an additional 6 credits in humanities and 3 credits in social sciences beyond the university minimum, and up to 16 credits in a foreign language.

**\*Upper Division Biology Electives include:** Experimental Field Ecology, Microscopic Anatomy, Immunology, Pathogenic Microbiology, Genomics, Virology, Computer Skills for Biologists, Advanced Field Botany, Neurobiology, Principles of Developmental Biology, Pathophysiology, Animal Behavior, Protein Structure and Function, Mammalogy, Invertebrate Zoology, Prokaryotic Molecular Biology, Cellular and Molecular Basis of Disease, Herpetology, Intermediate Organic Chemistry, Pesticides in the Environment, Insect Ecology, Introduction to Forest Insects, Ichthyology, Mathematical Biology, Plant Pathology, Advanced Laboratory Techniques, Cell Biology, Genetic Engineering, Conservation Biology, Fish and Wildlife Population Ecology, Ornithology, Veterinary and Medical Entomology, Medical Parasitology, Arthropod and Nematoda Physiology  
Additional classes can be substituted with prior approval from advisor and chairperson.