

B.S. and B.A. Biology Four-Year Sample Curriculum 2019-2020

Requirements subject to change. See UI Catalog for complete degree requirements and additional information. Updated 2/19/19.

1 st Year – Fall Semester			1 st Year – Spring Semester		
BIOL 114	Organisms and Environments <i>minimum 'C' required to graduate</i>	4	BIOL 115/115L	Cells & the Evolution of Life & Lab <i>Pre-/Coreq: CHEM 101/101L or CHEM 111/111L minimum 'C' required to graduate</i>	4
CHEM 111/111L	Principles of Chemistry I & Lab <i>Prereq: math test or min 'C' in CHEM 101, MATH 143 or 170</i>	4	CHEM 112/112L	Principles of Chemistry II & Lab <i>Prereq: Chem 111/111L</i>	5
MATH 170	Analytic Geometry and Calculus I <i>Prereq: math test or min 'C' in MATH 143 and MATH 144 (co-req possible).</i>	4	STAT 251 or *STAT 301	Statistical Methods or Probability & Statistics <i>Prereq: MATH 108, 137, 143, 160, or 170 or math test (SM); MATH 175 (P&S)</i>	3
ENGL 102	College Writing and Rhetoric <i>Prereq: ENGL 101 or test scores</i>	3	ISEM 101	Integrated Seminar	3
Total Credits		15	Total Credits		15
2 nd Year – Fall Semester			2 nd Year – Spring Semester		
BIOL 310/315 <i>(Fall only)</i>	Genetics & Lab <i>Prereq: BIOL 115/115L or BIOL 250</i>	4	BIOL 213 <i>(Spring only)</i>	Principles of Biological Structure and Function <i>Prereq: BIOL 114 or BIOL 115/BIOL 115L</i>	4
CHEM 277/278	Organic Chemistry I & Lab <i>Prereq: CHEM 112/112L</i>	4	BIOL 314 <i>(Spring only)</i>	Ecology and Population Biology <i>Prereq: BIOL 114 and BIOL 115/115L; STAT 251 or STAT 301; and MATH 160 or MATH 170</i>	4
PHYS 111/111L or PHYS 211/211L	General Physics I & Lab or Engineering Physics I & Lab <i>Prereq: MATH 143 (GP); MATH 170 (EP)</i>	4	PHYS 112/112L <i>(Spring only) or *PHYS 212/212L</i>	General Physics II & Lab or Eng. Physics II & Lab <i>Prereq: PHYS 111/111L (GP); PHYS 211/211L and MATH 175 (EP)</i>	4
Total Credits		15	Total Credits		15
3 rd Year – Fall Semester			3 rd Year – Spring Semester		
BIOL 300 or BIOL 380 <i>(both Fall only)</i>	Survey of Biochemistry or Biochemistry I <i>Prereq: CHEM 275 or 277 (SB); CHEM 112/112L and CHEM 277 (BI)</i>	3	BIOL 312/313 <i>(Spring only)</i>	Molecular and Cellular Biology & Lab <i>Prereq: BIOL 115/115L</i>	4
*see below	Upper Division Biology Elective	3	*see below	Upper Division Biology Elective	3
ENGL 317 or 207 or 208	Writing Course <i>Prereq: ENGL 102 (all); Junior stand. (317)</i>	3	ISEM 301	Great Issues Seminar <i>Prereq: ENGL 102 and Sophomore standing</i>	1
Total Credits		15	Total Credits		14
4 th Year – Fall Semester			4 th Year – Spring Semester		
BIOL 400	Seminar	1	Senior Experience	BIOL 401 or BIOL 405 (Fall) or BIOL 407 or BIOL 408 (Spring) or BIOL 411 (Spring)	2
*see below	Upper Division Biology Elective	3	BIOL 421 <i>(Spring only)</i>	Advanced Evolutionary Biology <i>Prereq: One of BIOL 310 or BIOL 314</i>	3
*see below	Upper Division Biology Elective	3	*see below	Upper Division Biology Elective	4
Total Credits		16	Total Credits		15

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.

***MATH 175** is required for **STAT 301** and **PHYS 212/212L**

***Upper Division Biology Electives include:** Comparative Vertebrate Anatomy, Plant Diversity and Evolution, Comparative Vertebrate Physiology, Special Topics: Experimental Field Ecology, Microscopic Anatomy, Immunology, Pathogenic Microbiology, Genomics, Virology, Computer Skills for Biologists, Advanced Field Botany, Neurobiology, Principles of Developmental Biology, Animal Behavior, Protein Structure and Function, Mammalogy, Invertebrate Zoology, Prokaryotic Molecular Biology, Eukaryotic Molecular Genetics, 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

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