

Biology Secondary Education

Typical 4-Year Plan

(for students who matriculate prior to Fall 2027
& formally admitted after 7/1/2025)

First Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS110 Intro to STEM Teaching I [fall-only; field placement]	1	SEMS 120 Intro to STEM Teaching II [spring-only; field placement]	1
Biology 200 Intro to Cellular Biology & Genetics AND BIOL 200L Introduction to Cellular Biology & Genetics Lab (Core Category 7)	4	BIOL 206 Intro to Ecology AND BIOL 206L Introduction to Ecology Lab (Core Category 8)	4
MATH 211 Calculus for Applications [or MATH 273, MATH 237] (Core Category 3) or MATH 231 Basic Statistics	3-4	CHEM 131 Gen Chem I AND CHEM 131 L Gen Chem I Lab	4
TSEM 102 (Core Category 1)	3	ENGL 102 (Core Category 2)	3
SEMS 250 Perspectives on Science & Math (Core Category 5)	3	Core Curriculum	3
		Core Curriculum	3
Total	14-15	Total	18

Sophomore Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS 230 Knowing & Learning	3	SEMS 250 Perspectives in Science and Mathematics	3
BIOL 204 Educational & career Planning for the Biologist	1	BIOL 309 Genetics	4
BIOL 207 Zoology	4	BIOL 205 Botany	4
CHEM 132 Gen Chem II AND CHEM 132 Genl Chem II Lab	4	Core Curriculum	3
SEMS 260 Diversity & Difference in STEM Classroom	3	Core Curriculum	3
Total	15	Total	17

Junior Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS 240 Classroom Interactions [field placement]	3	SCED 461 Teaching Reading in the Secondary Content Areas	3
SCED 460 Using Reading & Writing in Secondary Schools	3	Biology Elective	3-4
BIOL 325 Animal Physiology	4	BIOL 408 Molecular Biology	4
PHYS 211 General Physics	4	PAGS Elective [ASTR 161, GEOG 377, GEOL 121, or GEOL 123]	3-4
Core Curriculum	3	Core Curriculum	3
Total	17	Total	16-18

Senior Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS 498 Internship in Mathematics and Science Secondary Education [fall-only; field placement]	6	SCIE 393 Student Teaching in Secondary Education – Science [field placement]	12
SEMS 375 Science Pedagogy and Applications [fall-only; field placement]	6	SEMS 430 Seminar in Apprentice Teaching [field placement]	1
Total	12	Total	13

The minimum number of units required for graduation is 122.