

Earth Space Science – Typical Four-Year Sequence

Freshman Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS110 Introduction to STEM Teaching I: Inquiry Approaches to Teaching	1	SEMS 120 Introduction to STEM Teaching II: Inquiry-Based Lesson Design	1
CHEM 131 General Chemistry I and CHEM 131L General Chemistry I Lab (Core Category 7)	3 1	MATH 115 Basic Mathematics for the Sciences or MATH 119 Pre-Calculus or MATH 211 Calculus for Applications or MATH 273 Calculus I (Core Category 3)	3 – 4
GEOL 121 Physical Geology	4	GEOL 123 Historical Geology spring only	4
BIOL 120 Principles of Biology and BIOL 120L Principles of Biology Lab (Core Category 8)	3 1	CHEM 132 General Chemistry II and CHEM 132L General Chemistry II Lab	3 1
TSEM 102 (Core Category 1)	3	ENGL 102 (Core Category 2)	3
Total	16	Total	15 – 16

Sophomore Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS 230 Knowing and Learning	3	SEMS 240 Classroom Interactions	3
ASTR 161 General Astronomy I (Core Category 8)	4	ASTR 162 General Astronomy II spring only	4
PHYS 211 General Physics I	4	PHYS 212 General Physics II	4
Core Curriculum	3	Core Curriculum	3
Core Curriculum	3	Core Curriculum	3
Total	17	Total	17

Junior Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS 250 Perspectives on Science and Math (Core Category 5)	3	SEMS 370 Project-Based Instruction	3
GEOL 357 Physical Oceanography (if even year); GEOL 331 Mineralogy (if odd yr) both fall only	3 (4)	GEOL 305 Environmental Geology spring only	4
GEOG 373 Climatology fall/spring or GEOG 377 Meteorology fall only	3	Geosciences or Geography Elective	3–4
SCED 460 Using Reading & Writing in the Secondary Schools	4	Core Curriculum	3
Core Curriculum	3	Core Curriculum	3
Total	16 – 17	Total	16 even yr (17 odd yr)

Senior Year			
Fall Term		Spring Term	
Course	Units	Course	Units
SEMS 360 Research Methods (Core Category 9)	3	SCIE 393 Student Teaching in Secondary Education – Science	12
SCED 461 Teaching Reading in the Secondary Content Areas	3		
GEOL 357 Physical Oceanography (if even year); GEOL 331 Mineralogy (if odd yr) both fall only	3 (4)	SCIE 430 Seminar in Student Teaching – Science	1
SCIE 380 Teaching Science in the Secondary School	3		
SEMS 498 Internship in Mathematics and Science Secondary Education	3		
Total	15 even yr (16 odd yr)	Total	13

The total number of units required for graduation is 126 to 128.