

Bachelor of Science in Biology and Education with Endorsement in Secondary Education in Biology			
MAJOR REQUIREMENTS/BIOLOGY: 32-35 credits		MAJOR REQUIREMENTS/EDUCATION: 24 Credits (a)	
BY-109: Intro to Biodiversity & Evolution	4.0	ED-250: Psychological & Philosophical Foundations of Education	3.0
BY-110: Intro to Cell & Molecular Biology	4.0		
BY-216: Intro to Genetics	4.0		
BY-310: Biochemistry and Laboratory	4.0	EDS-330: Foundations of Special Education: Development Across the Life Span	3.0
BY-495: Senior Seminar	1.0		
Choose 2 Biology Courses from the following:		EDS-336: Classroom Management	3.0
BY-202: Human Biology & Health	6-8		
BY-205: Zoology		ED-319: Content Literacy	3.0
BY-211: Physiology with Anatomy I			
BY-212: Physiology with Anatomy II		ED-320: Teaching Students with Diverse Needs	3.0
BY-214: Botany			
BY-223: General Microbiology			
Choose 1 Biology Course from the following:		9 Credits as Follows (b):	
BY-440: Ecology	3-4	ED-416: Clinical Practice AND	8.0
BY-375L: Lab in Molecular & Cellular Biology		ED-416S: Seminar in Clinical Practice	1.0
Take 6 Credits of Biology from the Following:	6.0		
BY-303: Biological Oceanography			
BY-305: Ichthyology			
BY-317: Tropical Island Ecology			
BY-324: Applied Microbiology			
BY-440: Ecology OR			
BY-375L: Lab in Molecular & Cellular Biology (a course not used in the previous category)			
BY-404: Animal Behavior			
BY-406: Introduction to Neurosciences			
BY-410: Molecular Biology			
BY-431: Immunology			
BY-425: Principles of Developmental Biology			
BY-424: Evolution			
BY-475: Endocrinology			
BY-499: Independent Study in Biology			
INTERDISCIPLINARY REQUIREMENTS: 30 Credits		EDUCATION METHODS REQUIREMENTS: 6 Credits	
MA-115: Pre-Calculus Modeling for Biological Sciences	3.0	ED-369: Methods of Teaching Science for the Secondary Teacher Part I	3.0
or MA-116: Calculus for the Biological Science			
MA-151: Statistics with Applications	3.0	ED-370: Methods of Teaching Science for the Secondary Teacher Part II	3.0
CE-111: General Chemistry	3.0		
CE-111L: General Chemistry Lab	1.0		
CE-112: General Chemistry	3.0		
CE-112L: General Chemistry Lab	1.0		
CE-241: Organic Chemistry	3.0		
CE-241L: Organic Chemistry Lab	2.0		
CE-242: Organic Chemistry	3.0		
PH-105: Physics for the Life Sciences	3.0		
PH-105L: Physics for the Life Sciences Lab	1.0		
PH-106: Physics for the Life Sciences	3.0		
PH-106L: Physics for the Life Sciences Lab	1.0		

(a) Minimum grade of "C" required for Education Courses

(b) Students must complete the appropriate test requirement(s) with a passing score PRIOR to Clinical Practice.

Bachelor of Science in Biology and Education with Endorsement in Secondary Education in		Credits
GENERAL EDUCATION REQUIREMENTS: 36 Credits		
First Year Seminar	FY-101: First Year Seminar *(Select Section "BY")	3.0
Reading and Writing	EN-101: College Composition I	3.0
	EN-102: College Composition II	3.0
Mathematics	Fulfilled in Biology Interdisciplinary Requirements with Required Math Courses	0.0
Natural Sciences	Fulfilled in Major Requirements with required BY courses	0.0
Literature	3 Credits from courses designated with Course*Type: LIT	3.0
Aesthetics and Creativity	3 Credits from Art, Music, Theatre, or Dance	3.0
Technological Literacy	IT-102: Information Technology for Scientists	3.0
Reasoned Oral Discourse	Fulfilled in Major Requirements with ED-320	0.0
Historical Perspective	3 Credits from courses designated with Course*Type: HS.SV	3.0
Social Science	3 Credits from courses designated with Course*Type: SS.SV	3.0
Historical	3 Credits from courses designated with Course*Type: HS.SV	3.0
	or 3 Credits from courses designated with Course*Type: SS.SV	
Interdisciplinary Perspectives	3 Credits from courses designated with Course*Type: ISP	3.0
Cultural Diversity and Global Understanding or Foreign Language	3 Credits from courses designated with Course*Type: CD	6.0
	and 3 Credits from courses designated with Course*Type: GU	
	or 6 Credits from the SAME foreign language	
Experiential Education	One course designated with Course*Type: EX	0.0
Writing Intensive	Two courses from Biology (BY) designated with Course*Type: WT	0.0
		0.0
	Two courses from Education (ED, EDL, EDS) designated with Course*Type: WT	0.0
		0.0

<p>Minimum Credits for Bachelor of Science in Biology and Education with Endorsement in Secondary Education in Biology = 128.0</p> <p>ADDITIONAL ENDORSEMENTS AVAILABLE:</p> <p>• TSD - Teacher of Students with Disabilities - Secondary • ESL - English as a Second Language - Secondary</p>

NOTES:

* 58 credits must be completed at the 200 level or higher.

** Education majors are required to have an overall GPA of 3.00 for State Certification.

***By state regulation, all Education Majors seeking content area endorsement must complete 30 content credits (12+ credits at the 300+ level).