

Bachelor of Science in Biology and Education with Endorsement in Secondary Education in Biology

MAJOR REQUIREMENTS/BIOLOGY: 45 Credits		MAJOR REQUIREMENTS/EDUCATION: 24 Credits (a)	
BY109: Intro to Biodiversity & Evolution	4.0	ED250: Foundations of Teaching & Learning	3.0
BY110: Intro to Cell & Molecular Biology	4.0		
BY203: Invertebrate Zoology		ED201: Education Psychology	3.0
or BY204: Vertebrate Zoology	3.0	EDL206: Child & Adolescent Development	3.0
BY213: Biology of Vascular Plants		ED319: Literacy Across the Secondary Curriculum	3.0
or BY214: Botany	3.0	ED319N: NCATE Assessment	0.0
BY223: General Microbiology	4.0	ED320: Teaching Students with Diverse Needs	3.0
BY310: Biochemistry and Laboratory	4.0		
BY370: Cell Biology	3.0	ED-PRAXIS: Education Praxis II	0.0
BY375L: Lab Molecular & Cell	3.0	• PRAXIS - 20235	0.0
BY423: Genetics	4.0	• PRAXIS - 10435	0.0
BY425: Principles of Developmental Biology	4.0		
8 crs. of BY electives from among:		9 Credits as Follows:	
BY111, BY112, BY340,		ED416: Student Teaching AND	8.0
BY324, BY406, BY410,	8.0	ED416S: Seminar in Student Teaching	1.0
BY475, BY499		OR	
BY495: Senior Seminar & Portfolio	1.0	ED417: Supervised Student Teaching AND	8.0
		ED417S: Seminar - Supervised Student Teaching	1.0

BIOLOGY OUTSIDE MAJOR REQUIREMENTS: 30 Credits	EDUCATION METHODS REQUIREMENTS: 6 Credits (a)
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MA115: Math Models in Biology		ED369: Teaching Secondary Science, Part I	
or MA116: Calculus for Biology		or ED375: Secondary Teaching Methods Part I	3.0
or MA125: Calculus with Analytic Geometry I	3.0		
MA151: Statistics with Applications	3.0	ED370: Teaching Secondary Science, Part II	
		or ED376: Secondary Teaching Methods Part II	3.0
CE111: General Chemistry	3.0		
CE111L: General Chemistry Lab	1.0		
CE112: General Chemistry	3.0		
CE112L: General Chemistry Lab	1.0		
CE241: Organic Chemistry	3.0		
CE241L: Organic Chemistry Lab	2.0		
CE242: Organic Chemistry	3.0		
PH105: Physics for the Life Sciences	3.0		
PH105L: Physics for the Life Sciences Lab	1.0		
PH106: Physics for the Life Sciences	3.0		
PH106L: Physics for the Life Sciences Lab	1.0		
		EDUCATION OUTSIDE MAJOR REQUIREMENTS: 3 Credits	
		PY103: Introduction to Psychology	3.0

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

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GENERAL EDUCATION REQUIREMENTS: 33 Credits		Credits
First Year Seminar	FY-101: First Year Seminar *(Select Section "BY")	3.0
Reading and Writing	EN101: College Composition I	3.0
	EN102: College Composition II	3.0
Mathematics	Fulfilled in Biology Outside Major Requirements with MA115, or MA116, or MA125, and/or MA151	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	IT102: Information Technology for Scientists	3.0
Reasoned Oral Discourse	Fulfilled in Major Requirements with BY375L, or BY495, or ED320	0.0
Historical Perspective	3 Credits from courses designated with Course*Type: HS.SV	3.0
Social Science	Fulfilled in Education Outside Major Requirements with PY103	0.0
Historical Perspective/Social Sciences	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/Global Understanding	3 Credits from courses designated with Course*Type: CD	3.0
	3 Credits from courses designated with Course*Type: GU	3.0
	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

Total Credits for Bachelor of Science in Biology and Education with Endorsement in Secondary Education in Biology = 141
ADDITIONAL ENDORSEMENTS AVAILABLE: (Please review Endorsement Charts for Requirements) • TSD - Teacher of Students with Disabilities - Secondary (EDS.TSD.10) • ESL - English as a Second Language - Secondary (EDS.ESL.10)

NOTES:

- * 58 credits must be completed at the 200 level or higher.
- ** Education majors are required to have an overall GPA of 2.75 for State Certification.
- ***By state regulation, all Education Majors seeking content area endorsement must complete 12+ credits at the 300+ level in the content major.