

B.S. in Biology and Education with Endorsement in Elementary Education			
BIOLOGY MAJOR REQUIREMENTS: 44 Credits		Credits	
	BY109: Intro to Biodiversity & Evolution	4.0	
	BY110: Intro to Cell & Molecular Biology	4.0	
	BY203: Invertebrate Zoology or BY204: Vertebrate Zoology	3.0	
	BY213: Biology of Vascular Plants or BY214: Botany	3.0	
	BY223: General Microbiology	4.0	
	BY310: Biochemistry and Laboratory	4.0	
	BY370: Cell Biology	3.0	
	BY375L: Lab Molecular & Cell	2.0	
	BY423: Genetics	4.0	
	BY425: Principles of Developmental Biology	4.0	
8 Credits of Biology Electives	From Among: BY111, BY112, BY340, BY324, BY406, BY410, BY475, BY499	8.0	
	BY495: Senior Seminar & Portfolio	1.0	
EDUCATION MAJOR REQUIREMENTS: 30 Credits (a)		Credits	
9 credits as follows:	ED250: Foundations of Teaching & Learning	3.0	
	EDL326: Literacy Instruction in K-5 in Educational Settings I	3.0	
	EDL327: Literacy Instruction in K-5 Educational Settings II	3.0	
	EDL327N: NCATE Assessment	0.0	
	ED320: Teaching Students with Diverse Needs	3.0	
	ED360: Methods of Teaching Elementary Mathematics	3.0	
	ED360N: NCATE Assessment	0.0	
	ED361: Methods of Teaching Science for Elementary School	3.0	
	ED361N: NCATE Assessment	0.0	
	ED362: Teaching Elementary Social Studies	3.0	
	ED362N: NCATE Assessment	0.0	
	ED-PRAXIS: Education Praxis II • PRAXIS - 10014	0.0	
	ED416: Student Teaching (8 credits) <b>AND</b> ED416S: Seminar in Student Teaching (1 Credit)	9.0	
	OR ED417: Supervised Student Teaching (8 credits) <b>AND</b> ED417S: Seminar in Supervised Stud. Teaching (1 credit)		
	BIOLOGY OUTSIDE THE MAJOR REQUIREMENTS: 30 Credits		Credits
	MA115: Math Models in Biology or MA116: Calculus for Biology or MA125: Calculus with Analytic Geometry I	3.0	
	MA151: Statistics with Applications	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 THE MAJOR REQUIREMENTS: 9 Credits		Credits
		PY103: Introduction to Psychology	3.0
PY201: Educational Psychology		3.0	
PY206: Child & Adolescent Psychology		3.0	

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

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GENERAL EDUCATION REQUIREMENTS: 33 Credits		Credits
English	EN101: College English I	3.0
	EN102: College English II	3.0
Literature	EN201: Literature I	3.0
	EN202: Literature II	3.0
History	HS101: Western Civilization In World Perspective I	3.0
	HS102: Western Civilization In World Perspective II	3.0
Information Technology	IT102: Information Technology for Scientists	3.0
Critical Discourse	HU201: Critical Discourse (waived)	0.0
Science	Fulfilled in Major Requirements	0.0
Mathematics	Fulfilled in Requirements Outside Major	0.0
Social Science (partially fulfilled in Outside the Major Requirements)	Choose one course from among the following: any 100-level course in AN, GO, PS, SO; BE201, BE202, GS225	3.0
Aesthetics	AR101: Art Appreciation or MU101: Music Appreciation or TH101: Theater Appreciation or DA101: Dance Appreciation	3.0
Cross Cultural	One course chosen from the set of approved courses or 3 credits in the same foreign language	3.0
Perspectives	PRxxx	3.0
Experiential Education	EX001	0.0
Demonstration of Writing Proficiency	WP001	0.0
Writing Intensive Requirement	Two Biology (BY) courses designated as course type WT	0.0
		0.0
	Two Education (ED, EDL, EDS) courses designated as course type WT	0.0

TOTAL CREDITS FOR B.S. IN BIOLOGY AND EDUCATION WITH ENDORSEMENT IN ELEMENTARY EDUCATION = 146.0
<b>ADDITIONAL ENDORSEMENTS AVAILABLE:</b> (Please review Endorsement Charts for Requirements) <ul style="list-style-type: none"> <li>• TSD - Teacher of Students with Disabilities - Elementary (12 credits) K12.TSD.09</li> <li>• ESL - English as a Second Language - Elementary (12 credits) ELE.ESL.09</li> <li>• MID-SCI - Middle School Science (6 credits) MID.SCI.09</li> <li>• P-3 Early Childhood Endorsement (13 credits) ELE.P3.09</li> </ul>
• Teacher of Supplemental Instruction in Reading/Mathematics K-8 (3 credits) ELE.READ.MATH.09
<b>NOTES:</b> * 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.