

Bachelor of Science in Biology and Education with Endorsement in Elementary Education			
MAJOR REQUIREMENTS/BIOLOGY: 45 Credits (a)		MAJOR REQUIREMENTS/EDUCATION: 36 Credits (c)	
BY109: Intro to Biodiversity & Evolution	4.0	EDL201: Educational Psychology	3.0
BY110: Intro to Cell & Molecular Biology	4.0		
BY205: Zoology	3.0	EDL206: Child and Adolescent Development	3.0
BY214: Botany	3.0		
BY223: General Microbiology	4.0	ED250: Foundations of Teaching and Learning	3.0
BY310: Biochemistry and Laboratory	4.0		
BY370: Cell Biology	3.0	EDL326: Literacy Instruction in K-5 Educational Settings I	3.0
BY375L: Lab Molecular & Cell	3.0		
BY423: Genetics	4.0	ED320: Teaching Students with Diverse Needs	3.0
BY425: Principles of Developmental Biology	4.0		
8 crs. of BY electives from among: BY211, BY212, BY340, BY324, BY406, BY410, BY475, BY499	8.0	EDL327: Literacy Instruction in K-5 Educational Settings II	3.0
BY495: Senior Seminar	1.0		
BIOLOGY OUTSIDE MAJOR REQUIREMENTS: 30 Credits			
MA115: Intro to Mathematical Mod. in Bio.		ED360: Methods of Teaching Elementary Mathematics	3.0
OR MA116: Calculus for Biological Sciences			
OR MA125: Calculus with Analytic Geometry I	3.0	ED361: Methods of Teaching Science for Elementary School	3.0
MA151: Statistics with Applications	3.0		
CE111: General Chemistry	3.0	ED362: Teaching Elementary Social Studies	3.0
CE111L: General Chemistry Lab	1.0		
CE112: General Chemistry	3.0	9 Credits as Follows (d):	
CE112L: General Chemistry Lab	1.0	ED416: Student Teaching AND	8.0
CE241: Organic Chemistry	3.0	ED416S: Seminar in Student Teaching	1.0
CE241L: Organic Chemistry Lab	2.0		
CE242: Organic Chemistry	3.0	EDUCATION OUTSIDE MAJOR REQUIREMENTS: 3 Credits	
PH105: Physics for the Life Sciences	3.0		
PH105L: Physics for the Life Sciences Lab	1.0	PY103: Introduction to Psychology	3.0
PH106: Physics for the Life Sciences	3.0		
PH106L: Physics for the Life Sciences Lab	1.0		
<p>(a) Courses BY101 through BY108 are not used to calculate major GPA.</p> <p>(b) BY102, BY104, BY105, and BY106 are not available to BY majors.</p> <p>(c) Minimum grade of "C" required for Education Courses</p> <p>(d) Students must complete the appropriate test requirement(s) with a passing score PRIOR to Student Teaching.</p>			

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

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, 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 ED320	0.0
Historical Perspective	3 Credits from courses designated with Course*Type: HS.SV	3.0
Social Science	Fulfilled in 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 and Global Understanding or Foreign Language	3 Credits from courses designated with Course*Type: CD	6.0
	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	0.0
	Course*Type: WT	0.0
	Two courses from Education (ED, EDL, EDS) designated with	0.0
	Course*Type: WT	0.0

Minimum Credits for Bachelor of Science in Biology and Education with Endorsement in Elementary Education = 147.0

- ADDITIONAL ENDORSEMENTS AVAILABLE:**
- TSD - Teacher of Students with Disabilities - Elementary
 - ESL - English as a Second Language - Elementary
 - P-3 Early Childhood Endorsement
 - MID-SCI - Middle School Science

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.