

BIOLOGY SCIENCE EDUCATION REQUIREMENTS (BSE)

Code	Title	Units
Major Requirements - 32 units ^{1,2}		
BIOLOGY 141	INTRODUCTORY BIOLOGY I	5
BIOLOGY 142	INTRODUCTORY BIOLOGY II	5
BIOLOGY 251	INTRODUCTION TO GENETICS	4
BIOLOGY 257	INTRODUCTION TO ECOLOGY	3
At least one from:		2
BIOLOGY 254	BIOTECHNOLOGY LABORATORY METHODS I	
BIOLOGY 258	ECOLOGICAL FIELD METHODS	
Select one from:		4
BIOLOGY 340	COMPARATIVE VERTEBRATE ANATOMY	
BIOLOGY 361	HUMAN ANATOMY AND PHYSIOLOGY I	
Select electives above 250 except BIOLOGY 303, BIOLOGY 492 or BIOLOGY 493 to total 32 units in the major		9
Total Units		32

¹ An approved minor is not required for this major.

² GPA requirements:

- to graduate from the College of Education and Professional Studies, students in a BSE licensure major must have at least a combined GPA of 2.75; and
- students must achieve a grade of "C" (2.00) or better in all required courses with the prefixes EDFOUND, EDFNDPRC, ELEMMD, SECNDED, or SPECED before they can enroll in CIFLD 452 or CIFLD 454. Must pass the appropriate Praxis II content knowledge test by March 1 for a following fall semester student teaching placement, or October 1 for a following spring semester student teaching placement.

Code	Title	Units
Licensure Requirements:		
SPECED 205	INTRODUCTION TO SPECIAL EDUCATION	3
BIOLOGY 257	INTRODUCTION TO ECOLOGY	3
EDFOUND 212	EDUCATIONAL PSYCHOLOGY	3
EDFOUND 243	FOUNDATIONS OF EDUCATION IN A PLURALISTIC SOCIETY	3
EDFNDPRC 210	INTRODUCTION TO EDUCATION AND TEACHING	3
ELEMMD 324	TEACHING OF SCIENCE IN THE ELEMENTARY/MIDDLE SCHOOL	3
EDFOUND 425	MEASUREMENT AND EVALUATION IN THE SECONDARY SCHOOL	3
SECNDED 429	METHODS OF TEACHING SCIENCE	3
SECNDED 466	LITERACY IN THE DISCIPLINES	3
Select one of the following Directed Teaching groups:		14
Group A		
CIFLD 352	SCIENCE PRE-STUDENT TEACHING, MIDDLE LEVEL	

CIFLD 454	SCIENCE STUDENT TEACHING, SECONDARY LEVEL	
Group B		
CIFLD 354	SCIENCE PRE-STUDENT TEACHING, SECONDARY LEVEL	
CIFLD 452	SCIENCE STUDENT TEACHING, MIDDLE LEVEL	
Total Units		41
Code Title Units		
General Science and Other Unique Requirements:		
ASTRONMY 101	EXPLORING THE UNIVERSE	3-5
or ASTRONMY 112 INTRODUCTION TO ASTRONOMY		
BIOLOGY 200	WRITING IN BIOLOGY	3
or PWP 371 WRITING IN THE SCIENCES		
CHEM 102	GENERAL CHEMISTRY I	5
CHEM 104	GENERAL CHEMISTRY II	5
CHEM 251	ORGANIC CHEMISTRY - I	3
GEOLGY 100	PRINCIPLES OF GEOLOGY	4-5
or GEOGRPY 210 PHYSICAL GEOGRAPHY		
or GEOLGY 214 EARTH'S ENVIRONMENTAL HISTORY		
Select one from:		4-7
MATH 142	COLLEGE ALGEBRA	
& MATH 151 and TRIGONOMETRY		
MATH 152	PRECALCULUS	
MATH 243	CALCULUS FOR BUSINESS AND SOCIAL SCIENCES	
MATH 250	APPLIED CALCULUS SURVEY FOR BUSINESS AND SOCIAL SCIENCES	
MATH 253	CALCULUS AND ANALYTIC GEOMETRY I	
Select one from:		3-4
BIOLOGY 303	BIOSTATISTICS	
PSYCH 215	BASIC STATISTICAL METHODS	
STAT 230	INTRODUCTION TO STATISTICAL REASONING AND ANALYSIS	
Select one of the following sequences:		10
PHYSCS 140	PRINCIPLES OF PHYSICS I	
& PHYSCS 141 and PRINCIPLES OF PHYSICS II		
PHYSCS 180	PHYSICS FOR SCIENTISTS AND ENGINEERS I	
& PHYSCS 181 and PHYSICS FOR SCIENTISTS AND ENGINEERS II		
Total Units		40-47