

BACHELOR OF SCIENCE – EDUCATION – FIELD ENDORSEMENT IN SCIENCE (GRADES 7-12)

Students must complete the following program in addition to the Professional Education and Essential Studies requirements. It is strongly recommended that students pursuing this endorsement complete

- MATH 138 APPLIED CALCULUS to fulfill the Essential Studies SLO #4 requirement and
- GEOS 437 WORLD ENVIRONMENTAL ISSUES to fulfill the Essential Studies SLO #9 requirement.

Spanish language classes are highly encouraged. To obtain a departmental recommendation, the student must complete a minimum of 9 credit hours from Chadron State College in BIOL, CHEM, GEOS, or PHYS.

Students choosing the Science Field Teaching Endorsement opt for a concentration in one of four areas:

- Biology,
- Chemistry,
- Earth and Space Science, or
- Natural Science (see below)

A final grade of “C” or better must be attained in all endorsement area courses.

Code	Title	Credits
Essential Studies (http://catalog.csc.edu/undergraduate/essential-studies-program/)		
Professional Education Requirements (http://catalog.csc.edu/secondary-education-requirements/)		
Core Requirements		
BIOL 101 & 101L	GENERAL BIOLOGY I and GENERAL BIOLOGY I LABORATORY	4
BIOL 102 & 102L	GENERAL BIOLOGY II and GENERAL BIOLOGY II LABORATORY	4
CHEM 131 & 131L	COLLEGE CHEMISTRY I and COLLEGE CHEMISTRY I LABORATORY	4
CHEM 132 & 132L	COLLEGE CHEMISTRY II and COLLEGE CHEMISTRY II LABORATORY	4
GEOS 231 & 231L	PHYSICAL GEOLOGY and PHYSICAL GEOLOGY LAB	4
GEOS 234 & 234L	EARTH SYSTEM HISTORY and EARTH SYSTEM HISTORY LAB	4
PHYS 151 & 151L	COLLEGE PHYSICS I and COLLEGE PHYSICS I LABORATORY	4
PHYS 152 & 152L	COLLEGE PHYSICS II and COLLEGE PHYS II LAB	4
CHEM/GEOS 310	CAPSTONE I: RESEARCH SEMINAR	1
CHEM/GEOS/PHYS 320	SUPERVISED STUDY IN LAB AND FIELD METHODS	1-2
CHEM/GEOS 401	CAPSTONE II: SENIOR RESEARCH	1
CHEM/GEOS 410	CAPSTONE III: SENIOR RESEARCH/THESIS	1

Select one of the following concentrations:	12-16
Biology (p. 1)	
Chemistry (p. 1)	
Earth and Space Science (p. 1)	
Natural Science (p. 1)	

Total Credits 48-53

Biology

Code	Title	Credits
Core Requirements 36-37		
BIOL 241 & 241L	MICROBIOLOGY and MICROBIOLOGY LABORATORY	4
BIOL 332 & 332L	GENETICS and GENETICS LABORATORY	4
BIOL 336 & 336L	GENERAL ECOLOGY and GENERAL ECOLOGY LAB	3
BIOL 339 & 339L	COMPARATIVE ANATOMY AND PHYSIOLOGY and COMPARATIVE ANATOMY AND PHYSIOLOGY LABORATORY	4

Total Credits 51-52

Chemistry

Code	Title	Credits
Core Requirements 36-37		
CHEM 231 & 231L	SURVEY OF ORGANIC CHEMISTRY and SURVEY OF ORGANIC CHEMISTRY LAB	4
CHEM 335 & 335L	BIOCHEMISTRY I and BIOCHEMISTRY LABORATORY	4
CHEM 341 & 341L	QUANTITATIVE ANALYSIS and QUANTITATIVE ANALYSIS LABORATORY	4
CHEM 433 & 433L	ENVIRONMENTAL CHEMISTRY and ENVIRONMENTAL CHEMISTRY LABORATORY	4

Total Credits 52-53

Earth and Space Science

Code	Title	Credits
Core Requirements 36-37		
GEOS 138 & 138L	ASTRONOMY and ASTRONOMY LABORATORY	3
GEOS 334	METEOROLOGY	3
GEOS 431	HYDROGEOLOGY	3
GEOS 434	INTRODUCTION TO OCEANOGRAPHY	3
GEOS 439 & 439L	SEDIMENTOLOGY & STRATIGRAPHY and SEDIMENTOLOGY & STRATIGRAPHY L	4

Total Credits 52-53

Natural Science

Code	Title	Credits
Core Requirements 36-37		
BIOL 312 & 312L	BIOLOGY FOR EDUCATORS and BIOLOGY FOR EDUCATORS LABORATORY	4

CHEM 313 & 313L	QUANTITATIVE, ORGANIC, AND BIOLOGICAL CHEMISTRY FOR EDUCATORS and QUANTITATIVE, ORGANIC, AND BIOLOGICAL CHEMISTRY FOR EDUCATORS LABORATORY	4
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GEOS 312 & 312L	PLANETARY GEOLOGY FOR EDUCATORS and PLANETARY GEOLOGY FOR EDUCATORS LABORATORY	4
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Total Credits		48-49
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Prior to selecting this major, contact the certification officer at Chadron State College. The office is located in the Education Department of the Old Administration Building room 117 or by calling 308-432-6032.