

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 three areas:

- Biology,
- Chemistry, or
- Earth and Space Science (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 138 & 138L	GENERAL BIOLOGY: BOTANY and GENERAL BIOLOGY: BOTANY LABORATORY	4
BIOL 139 & 139L	GENERAL BIOLOGY: ZOOLOGY and GENERAL BIOLOGY: ZOOLOGY LABORATORY	4
CHEM 131 & 131L	COLLEGE CHEMISTRY I and COLLEGE CHEMISTRY I LAB	4
CHEM 132 & 132L	COLLEGE CHEMISTRY II and COLLEGE CHEMISTRY II LAB	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 LAB	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:		15-16

Biology (p. 1)	
Chemistry (p. 1)	
Earth and Space Science (p. 1)	
Total Credits	51-53

Biology

Code	Title	Credits
Core Requirements		
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		
CHEM 231 & 231L	SURVEY OF ORGANIC CHEMISTRY and SURVEY OF ORGANIC CHEMISTRY LAB	4
CHEM 335 & 335L	BIOCHEMISTRY and BIOCHEMISTRY LABORATORY	4
CHEM 341 & 341L	QUANTITATIVE ANALYSIS and QUANTITATIVE ANALYSIS LAB	4
CHEM 433 & 433L	ENVIRONMENTAL CHEMISTRY and ENVIRONMENTAL CHEMISTRY LAB	4
Total Credits		52-53

Earth and Space Science

Code	Title	Credits
Core Requirements		
GEOS 138 & 138L	ASTRONOMY and ASTRONOMY LABORATORY	3
GEOS 334	METEOROLOGY	3
GEOS 431	GEOLOGY OF WATER RESOURCES	3
GEOS 434	INTRODUCTION TO OCEANOGRAPHY	3
GEOS 439 & 439L	SEDIMENTOLOGY & STRATIGRAPHY and SEDIMENTOLOGY & STRATIGRAPHY L	4
Total Credits		52-53

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.