

EARTH AND SPACE SCIENCE/ SECONDARY MAJOR, BACHELOR OF ARTS IN EDUCATION (BAE)

GEOG 312	FUNDAMENTALS OF SOIL SCIENCE
or BIOL 312	FUNDAMENTALS OF SOIL SCIENCE
GEOG 315	SURFACE HYDROLOGY
GEOG 325	WETLAND SCIENCE I
GEOL 455	GEOLOGY OF THE COLORADO PLATEAU
GEOL 496	EXPERIMENTAL COURSE

Total Credits 107-108

Notes:

- grade requirement for BAE ≥ 2.5 cumulative average and ≥ 2.0 in each course;
- the above is an interdisciplinary major—see an advisor to determine if courses required by this major may be taken in partial fulfillment of the GEGRs;
- this major takes more than 12 quarters at 15–16 credits a quarter.

Secondary Education Required Core

EDUC 200 & EDUC 303 & EDUC 309	ADMISSION TO TEACHER EDUCATION and FOUNDATIONS OF ASSESSMENT and FOUNDATIONS OF SECONDARY CLASSROOM MANAGEMENT (these courses must be taken concurrently)	7
EDUC 201	INTRODUCTION TO EDUCATION	3
EDUC 341	SECONDARY STRATEGIES, MANAGEMENT, ASSESSMENT	4
EDUC 413	CONTENT AREA LITERACY: MANAGEMENT AND ASSESSMENT FOR SECONDARY EDUCATION CANDIDATES	4
EDUC 420	ADMISSION TO PROFESSIONAL CANDIDACY	1
EDUC 426	SECONDARY STUDENT TEACHING 7-12	15
PSYC 304	EDUCATIONAL PSYCHOLOGY	5
SPED 363	INTRODUCTION TO SPECIAL EDUCATION	4

Earth and Space Science Required Courses

CHEM 151	GENERAL CHEMISTRY	5
GEOG 305	INTRO TO OCEANOGRAPHY	5
GEOG 314	WEATHER AND CLIMATE	5
GEOG 410	GEOMORPHOLOGY	5
GEOL 120	PHYSICAL GEOLOGY - THE SOLID EARTH	5
GEOL 121	PHYSICAL GEOLOGY - SURFICIAL PROCESSES	5
GEOL 122	HISTORICAL GEOLOGY	5
GEOL 311	EARTH MATERIALS	4
GEOL 320	ENVIRONMENTAL GEOLOGY	4
or GEOL 360	GEOLOGIC HAZARDS	
GEOL 390	EARTH SCIENCE TEACHING METHODS	1
or GEOG 390	EARTH SCIENCE TEACHING METHODS	
MATH 142	PRECALCULUS II	5
PHYS 121	DESCRIPTIVE ASTRONOMY	5
PHYS 131	INTRODUCTORY PHYSICS I	4
PHYS 161	MECHANICS LABORATORY	1
SCED 390	SECONDARY SCIENCE TEACHING METHODS	1

Electives—students must take field-oriented coursework from the list below or from special field courses in GEOG or GEOL approved by the Earth and Space Science advisor.

GEOG 201	INTRODUCTION TO FIELD RESEARCH	
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For information on General Education, see Undergraduate Degree (<http://catalog.ewu.edu/archives/2015-2016/undergraduate-degree>) .

Student Learning Outcomes—students will

- demonstrate an understanding of the principles and concepts of Earth and Space Science and apply supporting knowledge of chemistry, biology and physics;
- demonstrate communication skills necessary to teach Earth and Space Science safely and effectively to secondary school students;
- demonstrate an understanding of various methods of science inquiry;
- plan and implement Earth and Space Science lessons aligned with the national and state standards; construct and use effective assessment strategies.