

EARTH AND SPACE SCIENCE (BS) / NATURAL SCIENCES (MS) - ENVIRONMENTAL SCIENCE TRACK (COMBINED OPTION)

Program of Study

Code	Title	Credit Hours
Core IMPACTS Area : Institutional Priorities ¹		4-5
COMM 1110	Public Speaking	3
ITDS 1779	Scholarship Across the Disciplines	2
LEAD 1705	Introduction to Servant Leadership	2
PERS 1506	Perspectives 1-hour	1
PERS 1507	Perspectives 2-hour	2
Foreign Language Course Options		
ARAB, CHIN, FREN, GERM, GREK, ITAL, JAPN, KREN, LATIN, PORT, SPAN - 1001, 1002, 2001, 2002		
SWAH 1001	Elementary Swahili I	
SWAH 1002	Elementary Swahili II	
Core IMPACTS Area : Mathematics & Quantitative Skills ¹		3-7
DATA 1501	Introduction to Data Science	3
MATH 1001	Quantitative Skills and Reasoning	3
MATH 1101	Introduction to Mathematical Modeling	3
MATH 1111	College Algebra	3
MATH 1113	Pre-Calculus	4
MATH 1125	Applied Calculus	3
MATH 1131	Calculus with Analytic Geometry I	4
MATH 1132	Calculus with Analytic Geometry II	4
MATH 1165	Computer-Assisted Problem Solving	3
MATH 1401	Introduction to Statistics	3
MATH 1501	Calculus I	4
MATH 2125	Introduction to Discrete Mathematics	3
STAT 1401	Elementary Statistics	3
Core IMPACTS Area : Political Science and U.S. History		6
HIST 2111	U. S. History to 1865	3
or HIST 2112	U. S. History since 1865	
POLS 1101	American Government	3
Core IMPACTS Area : Arts, Humanities, and Ethics		6
Select one Fine Arts course		3
ARTH 1100	Art Appreciation	
ARTH 2125	Introduction to the History of Art I– Prehistoric through Gothic	
ARTH 2126	Introduction to the History of Art II– Renaissance through Modern	
MUSC 1100	Music Appreciation	
THEA 1100	Theatre Appreciation	
ITDS 1145	Comparative Arts ²	
Select one Humanities course		3
ENGL 2111	World Literature I	
ENGL 2112	World Literature II	
ITDS 1774	Introduction to Digital Humanities	
PHIL 2010	Introduction to Philosophy	
ITDS 1145	Comparative Arts ²	
Core IMPACTS Area : Communicating in Writing		6
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
Core IMPACTS Area : Technology, Mathematics, and Sciences ¹		7-11
ANTH 1145	Human Origins	3
ASTR 1105	Descriptive Astronomy: The Solar System	3
ASTR 1106	Descriptive Astronomy: Stars and Galaxies	3
ASTR 1305	Descriptive Astronomy Lab	1
ATSC 1112	Understanding the Weather	3
ATSC 1112L	Understanding the Weather Lab	1
BIOL 1125	Contemporary Issues in Biology Non-Lab	3
BIOL 1215K	Introductory Biology	4
BIOL 1225K	Contemporary Issues in Biology with Lab	4
CHEM 1151	Survey of Chemistry I	4
& 1151L	and Survey of Chemistry I Lab	
CHEM 1152	Survey of Chemistry II	4
& 1152L	and Survey of Chemistry II Lab	
CHEM 1211	Principles of Chemistry I	4
& 1211L	and Principles of Chemistry I Lab	
CHEM 1212	Principles of Chemistry II	4
& 1212L	and Principles of Chemistry II Lab	
CPSC 1105	Introduction to Computing Principles and Technology	3
CPSC 1301K	Computer Science I	4
ENVS 1105	Environmental Studies	3
ENVS 1105L	Environmental Studies Laboratory	1
ENVS 1205K	Sustainability and the Environment	4
GEOG 2215	Introduction to the Geographic Information Systems	3
GEOL 1110	Natural Disasters: Our Hazardous Environment	3
GEOL 1121	Introductory Geoscience I: Physical Geology	3
GEOL 1121L	Introductory Geoscience I: Physical Geology Lab	1
GEOL 1122	Introductory Geo-sciences II: Historical Geology	3
GEOL 1322	Introductory Geo-sciences II: Historical Geology Lab	1
GEOL 2225	The Fossil Record	4
PHYS 1111	Introductory Physics I	4
& PHYS 1311	and Introductory Physics I Lab	
PHYS 1112	Introductory Physics II	4
& PHYS 1312	and Introductory Physics II Lab	
PHYS 1125	Physics of Color and Sound	3
PHYS 1325	Physics of Color and Sound Lab	1
PHYS 2211	Principles of Physics I	4
& PHYS 2311	and Principles of Physics I Lab	
PHYS 2212	Principles of Physics II	4
& PHYS 2312	and Principles of Physics II Lab	
Core IMPACTS Area : Social Sciences		6
Select one Behavioral Science course		
ECON 2105	Principles of Macroeconomics	

ECON 2106	Principles of Microeconomics	
PHIL 2030	Moral Philosophy	
PSYC 1101	Introduction to General Psychology	
SOCI 1101	Introduction to Sociology	
Select one World Cultures course		3
ANTH 1107	Discovering Archaeology	
ANTH 1105	Cultural Anthropology	
ANTH 2105	Ancient World Civilizations	
ANTH 2136	Language and Culture	
ENGL 2136	Language and Culture	
GEOG 1101	World Regional Geography	
HIST 1111	World History to 1500	
HIST 1112	World History since 1500	
ITDS 1155	The Western Intellectual Tradition	
ITDS 1156	Understanding Non-Western Cultures	
Core IMPACTS Total Hours		42
Health and Wellness		3
KINS 1106	Lifetime Wellness	2
or PHED 1205	Concepts of Fitness	
Select one PEDS course (https://catalog.columbusstate.edu/course-descriptions/peds/#peds)		

¹ The hours applied in the Institutional Priorities; Mathematics & Quantitative Skills; and Technology, Mathematics, and Sciences areas must add to 18 credit hours.

² ITDS 1145 Comparative Arts, though listed under both Fine Arts and Humanities, may be taken only once.

¹ Up to 3 can be added from Areas A, B and/or D with advisor approval.

² Courses taken for undergraduate credit may not be taken for graduate credit.

BS and MS Requirements

Major Requirements

Code	Title	Credit Hours
Core Requirements		
Complete the core requirements for this program		45
Core Total		45
Field of Study Requirements		
Minimum grade of C is required		
GEOG 1121	Introductory Geoscience I: Physical Geology	3
GEOG 1121L	Introductory Geoscience I: Physical Geology Lab	1
Select one of the following sequences:		8
Sequence 1:		
PHYS 1111	Introductory Physics I	
PHYS 1112	Introductory Physics II	
PHYS 1311	Introductory Physics I Lab	
PHYS 1312	Introductory Physics II Lab	
Sequence 2:		
PHYS 2211	Principles of Physics I	
PHYS 2212	Principles of Physics II	
PHYS 2311	Principles of Physics I Lab	

PHYS 2312	Principles of Physics II Lab	
Select 3 or more credits from the following:		3
ASTR 1105	Descriptive Astronomy: The Solar System	
ASTR 1305	Descriptive Astronomy Lab	
ASTR 1106	Descriptive Astronomy: Stars and Galaxies	
BIOL 1215K	Introductory Biology	
ENVS 1105	Environmental Studies	
ENVS 1205K	Sustainability and the Environment	
GEOL 1110	Natural Disasters: Our Hazardous Environment	

Up to 3 can be added from Areas A, B, and/or D with advisor approval 3

Field of Study Requirements Total 18

Required for the Major

Minimum grade of C is required		
BIOL 3217K	Ecology	4
CHEM 2115	Quantitative Chemical Analysis	3
CHEM 2315	Quantitative Chemical Analysis Lab	1
ENVS 3105	Foundations of Environmental Science	4
ENVS 5405U	Topics in Conservation (credits above 3 will count in Area H)	3-5
ENVS 5206U	Water Resources Management	4
GEOG 2215	Introduction to the Geographic Information Systems	3
ATSC 5117U	Global and Climate Change	3
GEOL 5255U	Environmental Geology	4
STAT 1401	Elementary Statistics	3
Take one of the following:		
ENVS 5125U	Human Ecology	3
or ENVS 5226U	Culture and Environment	
Required for the Major Total		35

Major Electives

Area H1 Undergraduate Required Hours	15
Any 3000+ BIOL, CHEM, ENVS, or GEOL course.	
With advisor approval, any 3000+ ANTH or GEOG course	
Combined Requirements:	9

Any Group B course from Area 2 of the graduate program, or with advisor approval, any 5000G+ ANTH, BIOL, CHEM, ENVS, GEOG, or GEOL course.

Master's Degree Coursework: 36 hours

Area 1 Graduate Program Core Required Hours	3	
ENGL 5149G	Grant Writing	
Area 2 Program Electives Required Hours:	21-22	
Group A: Take the following course		
ENVS 5207G	Experimental Design and Statistical Analysis	
ENVS 5715G	Earth and Space Sciences Seminar	
ENVS 5235G	Geographic Information and Global Positioning Systems	
Group B: Take one of the following. Courses taken for undergraduate credit may not be taken for graduate credit		
ANTH 5125G	Human Ecology	
ENVS 5165G	Hydrology	
ENVS 5226G	Culture and Environment	
ENVS 5315G	Stream Ecology	
ENVS 5405G	Topics in Conservation	

ENVS 5235G	Geographic Information and Global Positioning Systems
GEOL 5135G	Oceanography
GEOL 5215G	Geomorphology
*Add 9 hours from Area H2	
Area 3: Program Requirements:	11-12
Thesis Required Hours:	
ENVS 7000	Thesis Defense
ENVS 7999	Research in Environmental Science
Total Hours Required:	159