

# EARTH AND SPACE SCIENCE (BS) - ENVIRONMENTAL SCIENCE TRACK

## Program of Study

Code	Title	Credit Hours
<b>Core IMPACTS Area : Institutional Priorities <sup>1</sup></b>		<b>4-5</b>
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	
<b>Core IMPACTS Area : Mathematics &amp; Quantitative Skills <sup>1</sup></b>		<b>3-7</b>
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
<b>Core IMPACTS Area : Political Science and U.S. History</b>		<b>6</b>
HIST 2111	U. S. History to 1865	3
	or HIST 2112 U. S. History since 1865	
POLS 1101	American Government	3
<b>Core IMPACTS Area : Arts, Humanities, and Ethics</b>		<b>6</b>
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 <sup>2</sup>	
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 <sup>2</sup>	
<b>Core IMPACTS Area : Communicating in Writing</b>		<b>6</b>
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
<b>Core IMPACTS Area : Technology, Mathematics, and Sciences <sup>1</sup></b>		<b>7-11</b>
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	
<b>Core IMPACTS Area : Social Sciences</b>		<b>6</b>
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	
<b>Core IMPACTS Total Hours</b>		<b>42</b>
<b>Health and Wellness</b>		<b>3</b>
KINS 1106	Lifetime Wellness	2
or PHED 1205	Concepts of Fitness	
Select one PEDS course ( <a href="https://catalog.columbusstate.edu/course-descriptions/peds/#peds">https://catalog.columbusstate.edu/course-descriptions/peds/#peds</a> )		

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

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

## Major Requirements

Code	Title	Credit Hours
<b>Core Requirements</b>		
Complete the core requirements for this program		45
Core Total		45
<b>Field of Study Requirements</b>		
Minimum grade of C is required		
ASTR 1105	Descriptive Astronomy: The Solar System	3
ATSC 1112	Understanding the Weather	3
ENVS 1205K	Sustainability and the Environment	4
GEOG 1121	Introductory Geoscience I: Physical Geology	3
GEOG 1121L	Introductory Geoscience I: Physical Geology Lab	1
Select one of the following sequences:		4
Sequence 1:		
PHYS 1111	Introductory Physics I	
PHYS 1311	Introductory Physics I Lab	
Sequence 2:		
PHYS 2211	Principles of Physics I	
PHYS 2311	Principles of Physics I Lab	
Field of Study Requirements Total		18
<b>Required for the Major</b>		
Minimum grade of C is required		
ATSC 5117U	Global and Climate Change	3
BIOL 1215K	Introductory Biology	4
BIOL 3217K	Ecology	4
ENVS 4796	Senior Capstone	1
ENVS 3105	Foundations of Environmental Science	4

ENVS 5206U	Water Resources Management	4
GEOL 5255U	Environmental Geology	4
STAT 1401	Elementary Statistics	3
Choose one of the following (credits over 3 will be transferred to area H)		3
ENVS 5405U	Topics in Conservation	
GEOL 5258U	Field Methods in the Earth and Environmental Sciences	
Choose one of the following (credits over 3 will transfer to Area H)		3
GEOG 2215	Introduction to the Geographic Information Systems	
ENVS 5235U	Geographic Information and Global Positioning Systems	
Choose one course from the following (credits over 3 will transfer to Area H)		3
ATSC 5116U	Meteorology	
ATSC 5109U	Environmental Air Quality	
Required for the Major Total		36

### Major Electives

1 hour from Area A (MATH 1113 or MATH 1131)	1
Select 23 credits from the following:	23
Hours transferred from Area G (GEOL, ATSC, ENVS)	
Any 3000+ ATSC, ANTH, BIOL, CHEM, ENVS, GEOG or GEOL course	
ANTH 1105	Cultural Anthropology (if not taken in Area D)
ANTH 5125U	Human Ecology
ANTH 5175U	Physical Anthropology and Archeology
ENVS 4698	Internship (with approval of advisor)
ENVS 5109U	Environmental Air Quality
ENVS 5165U	Hydrology
ENVS 5207U	Experimental Design and Statistical Analysis
ENVS 5315U	Stream Ecology
ENVS 5715U	Earth and Space Sciences Seminar
ATSC 5125U	Severe and Hazardous Weather
ATSC 5175U	Hydrometeorology
GEOL 3201	Mineralogy and Petrology I
ASTR 3105	Physics, Chemistry, and Geology of the Solar System
GEOL 3265	Stratigraphy and Basin Analysis
GEOL 3275	Mapping and Field Geology
GEOL 5135U	Oceanography
GEOL 5215U	Geomorphology
GEOL 5275U	Vertebrate Paleontology
GEOG 5215U	Advanced Geographic Information Systems
BIOL 3215K	Cell Biology
BIOL 3216K	Genetics
BIOL 5246U	Entomology

The following courses may be taken in Area H provided the required minimum of 39 upper level credit hours has been met:

CHEM 3111	Organic Chemistry I
ATSC 1112L	Understanding the Weather Lab
GEOL 1110	Natural Disasters: Our Hazardous Environment
GEOL 2225	The Fossil Record
CHEM 3311	Organic Chemistry I Lab

CHEM 2115	Quantitative Chemical Analysis	
CHEM 2315	Quantitative Chemical Analysis Lab	
PHYS 1112	Introductory Physics II	
PHYS 1312	Introductory Physics II Lab	
PHYS 2212	Principles of Physics II	
PHYS 2312	Principles of Physics II Lab	
ASTR 1106	Descriptive Astronomy: Stars and Galaxies	
ASTR 1305	Descriptive Astronomy Lab	
Major Electives Total		24
<b>Total Credit Hours</b>		<b>123</b>