

Environmental Science: Geographic and Cartographic Sciences, B.S.

[Please refer to the Undergraduate Catalog for further program requirements and course descriptions.](#)

First Year – 30-33 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
ESC 1500/1500L: <i>Intro to Environmental Science I/Lab</i> (Natural Science)	4	ESC 1510/1510L: <i>Intro to Environmental Science II/Lab</i> (Natural Science)	4
GEOG 1030: <i>World Geography</i> (Individual and Global Citizenship)	3	CPSC 1100: <i>Fundamentals of Computer Science</i>	4
MATH 1130: <i>College Algebra</i> or MATH 1730: <i>Combined Precalculus</i> (Quantitative Reasoning)	3-4	MATH 1830: <i>Calculus for Management, Life, and Social Sciences</i> or MATH 1950: <i>Calculus w/ Analytic Geometry I</i> (Quantitative Reasoning)	3-4
Writing and Communication (ENGL 1010 or 1011)	3-4	Writing and Communication (ENGL 1020)	3
		Behavioral and Social Science	3
	13-15		17-18
Second Year – 29-30 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
BIOL 1110/1110L: <i>Principles of Biology I/Lab</i>	4	BIOL 1120/1120L: <i>Principles of Biology II/Lab</i>	4
GEOG 1010: <i>Physical Geography</i>	3	GEOL 1110/1110L: <i>Physical Geology/Lab</i>	4
GEOL 2100/2100L: <i>Introductory Geographic Information Systems and Remote Sensing/Lab</i>	4	ASTR 1010/1010L: <i>Introduction to Astronomy-The Solar System/Lab</i> or GEOL 2250/1105L: <i>Oceanography/Earth and Environment Lab</i>	4
ENGL 2820: <i>Scientific Writing*</i>	3	MATH 2100: <i>Introductory Statistics</i>	3
Elective	0-1		
	14-15		15
Third Year – 28-33 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
CPSC 1110: <i>Data Structure and Program Design</i> or GEOG Elective	3	BIOL 3060/3070: <i>Ecology/Lab</i>	4
ESC/GEOG 4650: <i>Remote Sensing and Imagery Analysis</i>	3-4	ESC/GEOG 4660: <i>Geographic Information Systems</i>	3
Approved GEOG Elective (3000-4000 Level)	3	Approved GEOG Elective (3000-4000 Level)	3
Humanities and Fine Arts	3-4	Approved GEOG Elective (3000-4000 Level)	3
Behavioral and Social Science	3	Elective	0-3
	15-17		13-16
Fourth Year – 24-33 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
ESC 3400: <i>Environmental Survey Methods</i> or ESC 3600: <i>Air and Water Pollution Control</i>	3-4	ESC 4100: <i>Environmental Law and Agencies</i>	3
ESC 4920: <i>Advanced Applications of Remote Sensing and Geographic Information Systems</i>	2	ESC 4840: <i>Values and the Environment</i>	3
Approved GEOG Elective (3000-4000 Level)	3	Humanities and Fine Arts	3-4
Humanities and Fine Arts**	3-4	Humanities and Fine Arts**	3-4
Elective**	1-3	Elective	0-3
	12-16		12-17

*Students can substitute ESC 4495r: *Departmental Thesis* for ENGL 2820.

**5-6 hours of 3000-4000 Level courses should be taken within General Education and/or Electives.

Completed:	Hrs	Degree Requirements:	Hrs
120 Total Hours		24-29 General Education Hours	
39 Upper Division (3000-4000 Level) Hours**		86-90 Program (Major) Hours	
30 Hours at UTC		Minor (<i>Not Required</i>)	
45 Hours at 4-year Institution		1-10 Elective Hours	
		Foreign Language (<i>Not Required</i>)	