

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

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

<b>First Year – 30-31 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
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
MATH 1710: <i>Precalculus I</i> (Mathematics)	3	MATH 1720: <i>Precalculus II</i>	3
GEOG 1030: <i>World Geography</i> (Non-Western Culture)	3	CPSC 1100: <i>Fundamental of Computer Science</i>	4
ENGL 1010 or 1011 (Rhetoric and Writing I)	3-4	ENGL 1020 (Rhetoric and Writing II)	3
		Behavioral and Social Science	3
	13-14		17
<b>Second Year – 31-32 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
ENGL 2820: <i>Scientific Writing</i> *	3	GEOG 1110/1110L: <i>Physical Geology/Lab</i>	4
MATH 1950: <i>Calculus with Analytic Geometry I</i>	3	ASTR 1010/L: <i>Intro to Astronomy-The Solar System/Lab</i> or GEOG 2250/L: <i>Oceanography/Lab</i>	4
BIOL 1110/1110L: <i>Principles of Biology I/Lab</i>	4	BIOL 1120/1120L: <i>Principles of Biology II/Lab</i>	4
GEOG 2100/L: <i>Intro. Geographic Info. Systems &amp; Remote Sensing/Lab</i>	4	MATH 2100: <i>Introductory Statistics</i> (Statistics)	3
GEOG 1010: <i>Physical Geography</i>	3		
	17		15
<b>Third Year – 31-32 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
ESC/GEOG 4650: <i>Remote Sensing &amp; Imagery Analysis</i>	3	BIOL 3060/3070: <i>Ecology/Lab</i>	4
GEOG Elective or CPSC 1110: <i>Data Structure and Program Design</i>	3-4	ESC/GEOG 4660: <i>Geographic Info Systems</i>	3
FAH: Historical Understanding	3	Approved GEOG Elective (3000-4000 Level)	3
Behavioral and Social Science	3	Approved GEOG Elective (3000-4000 Level)	3
Elective (3000-4000 Level)	3	FAH: Literature	3
	15-16		16
<b>Fourth Year – 24-28 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
ESC 3400: <i>Environmental Survey Methods</i> or ESC 3600: <i>Air &amp; 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 Info Systems</i>	2	ESC 4840: <i>Values and the Environment</i>	3
Approved GEOG Elective (3000-4000 Level)	3	Approved GEOG Elective (3000-4000 Level)	3
FAH: Thought, Values and Beliefs	3	FAH: Visual and Performing Arts	3
Elective (3000-4000 Level)	1-3	Elective	0-1
	12-15		12-13

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

<b>Completed:</b>			
<b>Graduation Requirements:</b>	<b>Hrs</b>	<b>Degree Requirements:</b>	<b>Hrs</b>
120 Total Hours		24-25 General Education Hours	
39 Upper Division (3000-4000) Hours*		89-91 Program (Major) Hours	
30 Hours at UTC		Minor ( <i>Not Required</i> )	
60 Hours at 4-year Institution		4-7 Elective Hours	
		Foreign Language ( <i>Not Required</i> )	