

# BACHELOR OF SCIENCE, MAJOR IN ENVIRONMENTAL SCIENCE (POLLUTION ABATEMENT)

Code	Title	Hours
<b>Bachelor of Science, Major in Environmental Science (Pollution Abatement)</b>		
<b>Core Curriculum</b>		
Component Area I (Communication)		6
Component Area II (Mathematics) <sup>1</sup>		3
Component Area III (Life and Physical Science)		8
Component Area IV (Language, Philosophy, and Culture) <sup>2</sup>		3
Component Area V (Creative Arts)		3
Component Area VI (U.S. History)		6
Component Area VII (Political Science/Government)		6
Component Area VIII (Social and Behavioral Sciences) <sup>3</sup>		3
Component Area IX (Component Area Option) <sup>4</sup>		4
<b>Degree Specific Requirements</b>		
BIOL 1401	Environmental Science	4
BIOL 1411	General Botany	4
BIOL 1413	General Zoology	4
BIOL 3409	General Ecology	4
BIOL 4330	Aquatic Biology	3
BIOL 4374	Biostatistics	3
CHEM 1411	General Chemistry I	4
CHEM 1412	General Chemistry II	4
CHEM 2323 & CHEM 2123	Organic Chemistry I: Lecture and Organic Chemistry I Lab	4
CHEM 2325 & CHEM 2125	Organic Chemistry II: Lecture and Organic Chemistry II: Lab	4
ECON 3352 or GEOG 4351	Energy & Environmental Econ Economic Geography	3
GEOG 1401	Weather and Climate <sup>5</sup>	4
GEOL 1403 or GEOL 1405	Physical Geology <sup>5</sup> Geologic Hazards & Resources	4
GEOL 3326	Environmental Geology	3
GEOG 4331	Conservation of Natural Res	3
MATH 1420	Calculus I <sup>6</sup>	4
POLS 3395	Environmental Policy	3
PLSC 3440 or GEOL 4426	Soil Science Hydrogeology	4
SOCI 3336 or SOCI 4337 or POLS 3366	Social Change And Development Environment And Society Public Administration	3
STAT 1369 or STAT 3379	Elementary Statistics Statistical Methods in Practice	3
<b>Prescribed Electives</b>		
Choose 18 hours		18
AGET 3383	Soil & Water Conservation Engr	
BIOL/GEOG 2320	Sustainability and Environment	
BIOL 2420	Intro Applied Microbiology	
BIOL 3470	General Microbiology	
BIOL 4320	Environmental Toxicology	

BIOL 3461	Wildlife Biology
CHEM 3368	Environmental Chemistry
ENGL 3330	Intro to Technical Writing
CHEM 4442	Air Quality
GEOG 3301	Environmental Geography
GEOG 3310	Sustainable Development
GEOG 4330	Hydrology and Water Resources
GEOG 4432	Geomorphology
GEOG 4333	Field Studies
GEOG 4357	Population Geography
GEOG 4361	Geographic Information Systems for Public Health
GEOG 4468	Remote Sensing
GEOG 4304	Geochemistry
GEOG 4426	Hydrogeology
HLTH 4390	Environmental Health
PHIL 3372	Philosophy of Science
PHIL 4306	Philosophy of Biology
PLSC 3440	Soil Science
PLSC 4330	Soil Fertility Mgt Fertilizers
PLSC 4370	Forage Crops & Pasture Mgmt
PLSC 4397	Integrated Pest Management

Total Hours 120

<sup>1</sup> MATH 1420 suggested if eligible; otherwise, take MATH 1314.

<sup>2</sup> SOCI 2319 needed as prerequisite for SOCI 3336.

<sup>3</sup> ECON 2301 need as prerequisite for ECON 3352.

<sup>4</sup> GEOG 2355 or GEOG 2356 suggested, plus 1 additional credit from this Component Area if did not take MATH 1420 or MATH 1410.

<sup>5</sup> Satisfies Core Curriculum requirement for Component Area III (Life and Physical Science).

<sup>6</sup> Satisfies 3 semester credit hours of the Core Curriculum requirement for Component Area II (Mathematics) and 1 semester credit hour for Core Curriculum Component Area IX.

### First Year

Fall	Hours	Spring	Hours
Component Area IV ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiv">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiv</a> ) <sup>1</sup>		3 BIOL 1401	4
GEOG 1401 <sup>2</sup>		4 BIOL 1411	4
HIST 1301 <sup>3</sup>		3 ENGL 1301 <sup>5</sup>	3
MATH 1420 ( If eligible) <sup>4</sup>		4 HIST 1302 <sup>3</sup>	3
	14		14

### Second Year

Fall	Hours	Spring	Hours
Component Area VIII ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii</a> ) <sup>6</sup>		3 BIOL 1413	4
CHEM 1411		4 CHEM 1412	4
GEOL 1403 or 1405 <sup>2</sup>		4 ENGL 1302 <sup>5</sup>	3
POLS 2305 <sup>7</sup>		3 POLS 2306 <sup>7</sup>	3
	14		14

### Third Year

Fall	Hours	Spring	Hours
BIOL 4330		3 BIOL 3409	4

BIOL 4374	3 CHEM 2325 & CHEM 2125	4
CHEM 2323 & CHEM 2123	4 ECON 3352 or GEOG 4351	3
GEOG 3326	3 STAT 1369 or 3379	3
PLSC 3440 or GEOG 4426	4	
		17
		14

**Fourth Year**

Fall	Hours	Spring	Hours
Component Area V ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav</a> )		3 Component Area IX ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix</a> ) <sup>9</sup>	3
Prescribed Electives <sup>8</sup>		9 Prescribed Electives <sup>8</sup>	9
GEOG 4331		3 SOCI 3336, 4337, or POLS 3366	3
POLS 3395		3	
		18	15

Total Hours: 120

- 1 SOCI 2319 needed to as prerequisite for SOCI 3336.
- 2 Satisfies Core Curriculum requirement for Component Area III (Life and Physical Science).
- 3 Satisfies Core Curriculum requirement for Component Area VI (U.S. History).
- 4 Satisfies 3 semester credit hours of the Core Curriculum requirement for Component Area II (Mathematics) and 1 semester credit hour for Core Curriculum Component Area IX.
- 5 Satisfies Core Curriculum requirement for Component Area I (Communication).
- 6 ECON 2301 or ECON 2302. ECON 2301 needed as prerequisite for ECON 3352.
- 7 Satisfies Core Curriculum requirement for Component Area VII (Political Science/Government).
- 8 See, Advance Electives (Environmental Science) list below.
- 9 GEOG 2355 or GEOG 2356 suggested, plus one additional credit in this Component Area if did not take MATH 1420 or MATH 1410.

Code	Title	Hours
<b>Prescribed Electives <sup>8</sup></b>		
AGET 3383	Soil & Water Conservation Engr	3
BIOL/GEOG 2320	Sustainability and Environment	3
BIOL 2420	Intro Applied Microbiology	4
BIOL 3461	Wildlife Biology	4
BIOL 3470	General Microbiology	4
BIOL 4320	Environmental Toxicology	3
CHEM 3368	Environmental Chemistry	3
CHEM 4442	Air Quality	4
ENGL 3330	Intro to Technical Writing	3
GEOG 3301	Environmental Geography	3
GEOG 3310	Sustainable Development	3
GEOG 4330	Hydrology and Water Resources	3
GEOG 4432	Geomorphology	4
GEOG 4333	Field Studies	3
GEOG 4357	Population Geography	3
GEOG 4361	Geographic Information Systems for Public Health	3
GEOG 4468	Remote Sensing	4
GEOG 4304	Geochemistry	3
GEOG 4426	Hydrogeology	4
HLTH 4390	Environmental Health	3
PHIL 3372	Philosophy of Science	3
PHIL 4306	Philosophy of Biology	3

PLSC 3440	Soil Science	4
PLSC 4330	Soil Fertility Mgt Fertilizers	3
PLSC 4370	Forage Crops & Pasture Mgmt	3
PLSC 4397	Integrated Pest Management	3

The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The BS in Environmental Science (Pollution Abatement) is designed to provide graduates with the following marketable skills:

- Ability to use the scientific method to address environmental problems.
- Ability to think critically and problem solve.
- Ability to use statistics to evaluate hypotheses.
- Ability to chemically analyze soil, water, and air samples.
- Ability to apply knowledge of ecosystems and the environment to address environmental issues.