

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

Code	Title	Hours
<b>Bachelor of Science, Major in Environmental Science (Pollution Abatement)</b>		
Core Curriculum		
	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 or BIOL 1406	General Botany General Biology I	4
BIOL 1413 or BIOL 1407	General Zoology General Biology II	4
BIOL 2320 or GEOG 2320	Sustainability and Environment Sustainability & Environment	3
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 2401	Quantitative Analysis	4
GEOG 1401	Weather and Climate <sup>5</sup>	4
CHEM 3368	Environmental Chemistry	3
GEOL 1403	Physical Geology <sup>5</sup>	4
GEOL 3326	Environmental Geology	3
GEOL 4426	Hydrogeology	4
GEOL 4304	Geochemistry	3
GEOG 4331	Conservation of Natural Res	3
MATH 1342 or STAT 3379 or MATH 3379	Elementary Statistics Statistical Methods in Practice Statistical Methods in Practice	3
MATH 1420	Calculus I <sup>6</sup>	4
POLS 3395	Environmental Policy	3
PLSC 3440	Soil Science	4
<b>Prescribed Electives (At least nine hours must be advanced)</b>		
Select 11 hours from the following;		11
AGET 3383	Soil & Water Conservation Engr	
BIOL 2420	Intro Applied Microbiology	
BIOL 3461	Wildlife Biology	
BIOL 3470	General Microbiology	
BIOL 4320	Environmental Toxicology	

CHEM 2125	Organic Chemistry II: Lab
CHEM 2325	Organic Chemistry II: Lecture
CHEM 4442	Air Quality
ECON 3352	Energy & Environmental Econ
ENGL 3330	Intro to Technical Writing
ENVR 4361	Environ Sci Field Exp
GEOG 3301	Environmental Geography
GEOG 3310	Sustainable Development
GEOG 4330	Hydrology and Water Resources
GEOG 4432	Geomorphology
GEOG 4333	Field Studies
GEOG 4351	Economic Geography
GEOG 4361	Geographic Information Systems for Public Health
GEOG 4468	Remote Sensing
GEOL 3330	Oceanography
GEOL 4312	Economic Geology
HLTH 4390	Environmental Health
PLSC 4330	Soil Fertility Mgt Fertilizers
PLSC 4370	Forage Crops & Pasture Mgmt
PLSC 4397	Integrated Pest Management
SOCI 4337	Environment And Society
WMGT 2301	Principles of Wildlife Mgmt
WMGT 3382	Habitat & Pond Management

**Total Hours****120**

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

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
Component Area IV ( <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> ) <sup>1</sup>		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>5</sup>	3
CHEM 1411		4 CHEM 1412	4
ENGL 1301 <sup>2</sup>		3 ENGL 1302 <sup>2</sup>	3
HIST 1301 <sup>3</sup>		3 HIST 1302 <sup>3</sup>	3
MATH 1420 ( If eligible) <sup>4</sup>		4 BIOL 1401	4
	<b>17</b>		<b>17</b>

**Second Year**

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
BIOL 1406 or 1411		4 BIOL 1413 or 1407	4
CHEM 2323		3 CHEM 2401	4
CHEM 2123		1 GEOG 1401 <sup>6</sup>	4
GEOL 1403 <sup>6</sup>		4 POLS 2306 <sup>7</sup>	3
POLS 2305 <sup>7</sup>		3	
	<b>15</b>		<b>15</b>

**Third 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>8</sup>		3 BIOL 3409	4
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 GEOL 3326	3
CHEM 3368		3 MATH 1342, 3379, or STAT 3379	3
GEOG 2320 or BIOL 2320		3 POLS 3395	3
PLSC 3440		4	
		<b>16</b>	<b>13</b>

**Fourth Year**

Fall	Hours	Spring	Hours
BIOL 4330		3 GEOG 4331	3
BIOL 4374		3 Prescribed Electives <sup>9</sup>	3
GEOL 4304		3 Prescribed Electives <sup>9</sup>	8
GEOL 4426		4	
		<b>13</b>	<b>14</b>

**Total Hours: 120**

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

Code	Title	Hours
<b>Prescribed Electives (At least nine hours must be advanced)<sup>9</sup></b>		
AGET 3383	Soil & Water Conservation Engr	3
BIOL 2420	Intro Applied Microbiology	4
BIOL 3461	Wildlife Biology	4
BIOL 3470	General Microbiology	4
BIOL 4320	Environmental Toxicology	3
CHEM 2125	Organic Chemistry II: Lab	1
CHEM 2325	Organic Chemistry II: Lecture	3
CHEM 4442	Air Quality	4
ECON 3352	Energy & Environmental Econ	3
ENGL 3330	Intro to Technical Writing	3
ENVR 4361	Environ Sci Field Exp	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 4351	Economic Geography	3
GEOG 4361	Geographic Information Systems for Public Health	3

GEOG 4468	Remote Sensing	4
GEOL 3330	Oceanography	3
GEOL 4312	Economic Geology	3
HLTH 4390	Environmental Health	3
PLSC 4330	Soil Fertility Mgt Fertilizers	3
PLSC 4370	Forage Crops & Pasture Mgmt	3
PLSC 4397	Integrated Pest Management	3
SOCI 4337	Environment And Society	3
WMGT 2301	Principles of Wildlife Mgmt	3
WMGT 3382	Habitat & Pond 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:

- Use the scientific method to address environmental problems.
- Think critically and problem solve.
- Use statistics to evaluate hypotheses.
- Chemically analyze soil, water, and air samples.
- Apply knowledge of ecosystems and the environment to address environmental issues.