

# BACHELOR OF SCIENCE, MAJOR IN ENVIRONMENTAL SCIENCE (SUSTAINABILITY)

Code	Title	Hours
<b>Bachelor of Science, Major in Environmental Science (Sustainability)</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) <sup>2</sup>		8
Component Area IV (Language, Philosophy, and Culture) <sup>3</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>4</sup>		3
Component Area IX (Component Area Option) <sup>5</sup>		4
<b>Degree Specific Requirements</b>		
BIOL 1411 or BIOL 1406	General Botany General Biology I	4
BIOL 1413 or BIOL 1407	General Zoology General Biology II	4
CHEM 1411	General Chemistry I	4
MATH 1314	Pre Calculus Algebra <sup>1</sup>	3
MATH 1342 or MATH 3379 or STAT 3379	Elementary Statistics Statistical Methods in Practice Statistical Methods in Practice	3
<b>Major: Foundation</b>		
BIOL 1401	Environmental Science <sup>2</sup>	4
BIOL/GEOG 3320	Sustainability & Environment	3
BIOL 3409	General Ecology	4
BIOL 4374	Biostatistics	3
ECON 3352 or GEOG 4351	Energy & Environmental Econ <sup>4</sup> Economic Geography	3
GEOG 1401	Weather and Climate <sup>2</sup>	4
GEOG 2464	Intro to Geographic Info Sys	4
GEOG 3310	Sustainable Development	3
GEOG 4331	Conservation of Natural Res	3
GEOG 4432 or GEOG 4330	Geomorphology Hydrology and Water Resources	3-4
GEOG 4361 or GEOG 4468	Geographic Information Systems for Public Health Remote Sensing	3-4
Select one of the following:		4
GEOL 1403	Physical Geology	
GEOL 1405	Geologic & Environmental Hazards	
GEOL 3326	Environmental Geology	3
PLSC 3440	Soil Science	4
POLS 3395	Environmental Policy	3
SOCI 3336 or SOCI 4337 or POLS 3366	Social Change And Development <sup>3</sup> Environment And Society Public Administration	3
<b>Major: Prescribed Advanced Electives</b>		
Select 17 hours from the following advanced electives:		17

AGET 3383	Soil & Water Conservation Engr
BIOL 3461	Wildlife Biology
BIOL 4330	Aquatic Biology
ENGL 3330	Intro to Technical Writing
ENVR 4361	Environ Sci Field Exp
GEOG 3301	Environmental Geography
GEOG 3350	Cultural Geography
GEOG 4330	Hydrology and Water Resources
GEOG 4333	Field Studies
GEOG 4356	Urban Geography
GEOG 4357	Population Geography
GEOG 4361	Geographic Information Systems for Public Health
GEOG 4365	Applied Geographic Info Systems
GEOG 4468	Remote Sensing
GEOL 3330	Oceanography
GEOL 4426	Hydrogeology
HLTH 4390	Environmental Health
PHIL 3372	Philosophy of Science
PHIL 4306	Philosophy of Biology
PHIL 4334	Environmental Ethics
PLSC 4330	Soil Fertility Mgt Fertilizers
PLSC 4370	Forage Crops & Pasture Mgmt
PLSC 4397	Integrated Pest Management
POLS 3302	Introduction to Public Policy
POLS 3339	Nonprofit Organizations
POLS 3366	Public Administration
SOCI 4337	Environment And Society
WMGT 3382	Habitat & Pond Management

Minor: Not Required<sup>6,7</sup>

**Total Hours**

**120-122**

- <sup>1</sup> MATH 1314 needed as a prerequisite for CHEM 1411 and BIOL 4374. In addition, satisfies the Core Curriculum requirement for Component Area II (Mathematics).
- <sup>2</sup> Satisfies the Core Curriculum requirement for Component Area III (Life and Physical Science).
- <sup>3</sup> SOCI 2319 satisfies Component Area VIII (Social and Behavioral Sciences) as well as serves as a prerequisite for SOCI 3336 and SOCI 4337.
- <sup>4</sup> ECON 2301 satisfies Component Area VIII (Social and Behavioral Sciences) as well as serves as a prerequisite for ECON 3352.
- <sup>5</sup> GEOG 2355 or GEOG 2356 is recommended plus 1 semester credit hour.
- <sup>6</sup> A minor is **not required** for this degree program; however, a student has the option to add a minor, but to do so additional semester credits hours will be needed above the degree program's stated total semester credit hours. All minors can be paired with this degree program.
- <sup>7</sup> All minors can be paired with this degree program.

## Notes

Students must earn a 2.0 minimum overall GPA in all coursework.

Students must meet a 2.0 minimum overall major GPA in all major coursework.

Students must earn a 2.0 minimum SHSU GPA in all coursework.

Students must meet a 2.0 minimum SHSU major GPA in all major coursework.

## First Year

Fall	Hours	Spring	Hours
BIOL 1401 <sup>1</sup>		4 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> )	1

ENGL 1301 <sup>2</sup>	3	CHEM 1411 <sup>4</sup>	4
GEOG 1401 <sup>1</sup>	4	ENGL 1302 <sup>2</sup>	3
HIST 1301 <sup>3</sup>	3	GEOL 1403 or 1405 <sup>1</sup>	4
MATH 1314 <sup>4</sup>	3	HIST 1302 <sup>3</sup>	3

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**Second 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 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>7</sup>	3
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>5</sup>		3 Component Area IX ( <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 1411 or 1406		4 BIOL 1413 or 1407	4
MATH 1342, 3379, or STAT 3379		3 GEOG 2464	4
POLS 2305 <sup>6</sup>		3 POLS 2306 <sup>6</sup>	3

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**Third Year**

Fall	Hours	Spring	Hours
BIOL 3320 or GEOG 3320		3 ECON 3352 or GEOG 4351 <sup>5</sup>	3
BIOL 3409		4 GEOG 4432 or 4330	3 or 4
GEOG 4331		3 GEOL 3326	3
GEOG 4468 or 4361	3 or 4	POLS 3395	3
		Prescribed Advance Elective (Environmental Science) <sup>9</sup>	3

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**Fourth Year**

Fall	Hours	Spring	Hours
BIOL 4374 <sup>4</sup>		3 Prescribed Advance Elective (Environmental Science) <sup>9</sup>	3
GEOG 3310		3 Prescribed Advance Elective (Environmental Science) <sup>9</sup>	4
PLSC 3440		4 Prescribed Advance Elective (Environmental Science) <sup>9</sup>	3
Prescribed Advance Elective (Environmental Science) <sup>9</sup>		4 SOCI 3336, 4337, or POLS 3366	3

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**Total Hours: 120-122**

- <sup>1</sup> Satisfies the Core Curriculum requirement for Component Area III (Life and Physical Science).
- <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 the Core Curriculum requirement for Component Area II (Mathematics). MATH 1314 satisfies prerequisite requirement for CHEM 1411 and BIOL 4374.
- <sup>5</sup> ECON 2301 satisfies Component Area VIII (Social and Behavioral Sciences) as well as serves as a prerequisite for ECON 3352.
- <sup>6</sup> Satisfies Core Curriculum requirement for Component Area VII (Political Science/Government).
- <sup>7</sup> SOCI 2319 satisfies Component Area VIII (Social and Behavioral Sciences) as well as serves as a prerequisite for SOCI 3336.
- <sup>8</sup> GEOG 2355 or GEOG 2356 is recommended plus 1 semester credit hour.
- <sup>9</sup> See, Major: Prescribed Advanced Elective (Environmental Science) course list below.

Code	Title	Hours
<b>Major: Prescribed Advanced Elective (Environmental Science)<sup>9</sup></b>		
AGET 3383	Soil & Water Conservation Engr	3
BIOL 3461	Wildlife Biology	4
BIOL 4330	Aquatic Biology	3
ENGL 3330	Intro to Technical Writing	3
ENVR 4361	Environ Sci Field Exp	3

GEOG 3301	Environmental Geography	3
GEOG 3350	Cultural Geography	3
GEOG 4330	Hydrology and Water Resources	3
GEOG 4333	Field Studies	3
GEOG 4356	Urban Geography	3
GEOG 4357	Population Geography	3
GEOG 4361	Geographic Information Systems for Public Health	3
GEOG 4365	Applied Geographic Info Systems	3
GEOG 4432	Geomorphology	4
GEOG 4468	Remote Sensing	4
GEOL 3330	Oceanography	3
GEOL 4426	Hydrogeology	4
HLTH 4390	Environmental Health	3
PHIL 3372	Philosophy of Science	3
PHIL 4306	Philosophy of Biology	3
PHIL 4334	Environmental Ethics	3
PLSC 4330	Soil Fertility Mgt Fertilizers	3
PLSC 4370	Forage Crops & Pasture Mgmt	3
PLSC 4397	Integrated Pest Management	3
POLS 3302	Introduction to Public Policy	3
POLS 3339	Nonprofit Organizations	3
POLS 3366	Public Administration	3
SOCI 4337	Environment And Society	3
WMGT 3382	Habitat & Pond Management	3

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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 (Sustainability) is designed to provide graduates with the following marketable skills:

- Use the scientific method to address environmental problems.
- Think critically.
- Generate and/or interpret geospatial data based geographic information systems (GIS) and remote sensing.
- Apply knowledge of the environment and ecosystems to address environmental issues.
- Problem solve.