

# BACHELOR OF SCIENCE, MAJOR IN ENGINEERING TECHNOLOGY - CONCENTRATION IN ELECTRONICS

**Additional information:** Reference the Program Landing Page (<https://www.shsu.edu/programs/bachelor-of-science-in-engineering-technology/>) for additional information, such as cost, delivery format, contact information, or to schedule a visit.

Code	Title	Hours
<b>Bachelor of Science, Major in Engineering Technology - Concentration in Electronics</b>		
<b>Core Curriculum</b> ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/</a> )		
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)		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)		3
Component Area IX (Component Area Option) <sup>1</sup>		4
<b>Degree Specific Requirements</b>		
ENGL 3330 or MATH 3379	Introduction to Technical Writing Statistical Methods in Practice	3
MATH 1314	Pre Calculus Algebra <sup>1</sup>	3
MATH 1316	Plane Trigonometry <sup>1</sup>	3
PHYS 1301 & PHYS 1101	General Physics-Mechanics and Heat and General Physics Laboratory I	4
PHYS 1302 & PHYS 1102	General Physics-Sound, Light, Electricity, and Magnetism and General Physics Laboratory II	4
<b>Major: Foundation</b>		
ETDD 1361	Engineering Graphics	3
ETEC 1010	Engineering Foundations	1
ETEC 3340 or ETEC 4340	Solar and Wind Energy Systems Alternative Energy Technology	3
ETEC 4199	Senior Design I	1
ETEC 4384 or ETEE 3313	Supervisory Personnel Practice Industrial Robotics	3
ETEC 4391	Work Base Mentorship (internship)	3
ETEC 4399	Senior Design II	3
ETEE 1340	Introduction to Circuits	3
ETEE 2320	Circuits and Systems	3
ETEE 3345	Digital Electronics	3
ETEE 3350	Analog Electronics	3
ETEE 3360	Electrical Power & Machinery	3
ETEE 3373	Control Systems Technology	3
ETEE 3376	Microcontroller Applications	3
ETEE 4351	Automation and Programmable Logic Controllers (PLCs)	3
ETEE 4352	Instrumentation & Interfacing	3
ETSM 3386	Industrial Safety	3
<b>Minor: Required</b> <sup>2</sup>		
Minor		6

Minor (12 hours advanced)	12
<b>Total Hours</b>	<b>121</b>

- <sup>1</sup> MATH 1314, MATH 1316, MATH 1324, and MATH 1420 satisfy the Core Curriculum requirement for Component Area II (Mathematics). MATH 1314 and MATH 1316 also satisfy the Degree Specific requirement. MATH 1420 will satisfy one semester credit hour of the Core Curriculum requirement for Component Area IX (Component Area Option).
- <sup>2</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.

Students should use elective and/or minor hours to satisfy the 42 advanced hour requirement.

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### First Year

Fall	Hours	Spring	Hours
Component Area I ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai</a> )		3 Component Area I ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai</a> )	3
Component Area IX ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix</a> ) <sup>1</sup>		4 Component Area IV ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai</a> )	3
ETEC 1010		1 ETDD 1361	3
ETEE 1340		3 ETEE 2320	3
MATH 1314 <sup>1</sup>		3 MATH 1316 <sup>1</sup>	3
		<b>14</b>	<b>15</b>

### Second Year

Fall	Hours	Spring	Hours
Component Area V ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav</a> )		3 Component Area VI ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi</a> )	3
Component Area VI ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi</a> )		3 Component Area VII ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii</a> )	3
ETEC 3340 or 4340		3 Component Area VIII ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii</a> )	3
ETEE 3350		3 ENGL 3330 or MATH 3379	3
PHYS 1301 & PHYS 1101		4 PHYS 1302 & PHYS 1102	4
		<b>16</b>	<b>16</b>

**Third Year**

Fall	Hours	Spring	Hours
Component Area III ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii</a> )		4 Component Area III ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii</a> )	4
Component Area VII ( <a href="https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii">https://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii</a> )		3 ETEC 4384 or ETEE 3313	3
ETEE 3373		3 ETSM 3386	3
Minor <sup>2</sup>		6 Minor Advanced <sup>2</sup>	6
		<b>16</b>	<b>16</b>

**Fourth Year**

Fall	Hours	Spring	Hours
ETEC 4199		1 ETEC 4391	3
ETEE 3345		3 ETEC 4399	3
ETEE 3376		3 ETEE 3360	3
ETEE 4351		3 ETEE 4352	3
Minor Advanced <sup>2</sup>		6	
		<b>16</b>	<b>12</b>

**Total Hours: 121**

<sup>1</sup> MATH 1314, MATH 1316, MATH 1324, and MATH 1420 satisfy the Core Curriculum requirement for Component Area II (Mathematics). MATH 1314 and MATH 1316 also satisfy the Degree Specific requirement. MATH 1420 will satisfy one semester credit hour of the Core Curriculum requirement for Component Area IX (Component Area Option).

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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 Engineering Technology - Concentration in Electronics is designed to provide graduates with the following marketable skills:

- Select and effectively apply modern electric, electronics, controls, and computer devices and systems.
- Test and troubleshoot for effective and efficient operations of analog, digital, microcontroller and communication circuits and systems.
- Embed state-of-the-art automation, robotics, instrumentation, and data acquisition hardware and software tools into industrial environments.
- Prepare technical reports, product manuals, and testing instructions and communicate effectively.
- Learn about and practice safety and supervisory skills related to electronics.