

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

Code	Title	Hours
<b>Bachelor of Science, Major in Engineering Technology - Concentration in Electronics</b>		
Core Curriculum ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/">http://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	Intro 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 Phy-Mechanics & Heat and General Physics Laboratory I	4
PHYS 1302 & PHYS 1102	Gen Phy-Snd,Lght, Elec, & Mag and General Physics Laboratory II	4
<b>Major Core</b>		
ETDD 1361	Engineering Graphics	3
ETEC 1010	Engineering Foundations	1-2
ETEE 1340	Introduction to Circuits	3
<b>Major</b>		
ETEC 3340 or ETEC 4340	Solar and Wind Energy Systems Alternative Energy Technology	3
ETEC 3376	Microcontroller Applications	3
ETEC 4384 or ETEE 3313	Supervisory Personnel Practice Industrial Robotics	3
ETEC 4391	Work Base Mentorship (internship)	3
ETEC 4399	Senior Design	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 4351	Automation & Control Systems	3
ETEE 4352	Instrumentation & Interfacing	3
ETSM 3386	Industrial Safety	3
<b>Minor: Required</b>		
Minor		6
Minor (12 hours advanced)		12
<b>Total Hours</b>		<b>120-121</b>

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

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

### First Year

Fall	Hours	Spring	Hours
Component Area I ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai</a> )		3 Component Area I ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai</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> )		4 Component Area IV ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiiv">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiiv</a> )	3
ETEC 1010		1-2 ETDD 1361	3
ETEE 1340		3 ETEE 2320	3
MATH 1314 <sup>1</sup>		3 MATH 1316 <sup>1</sup>	3
		<b>14-15</b>	<b>15</b>

### 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 VI ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi</a> )	3
Component Area VI ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi</a> )		3 Component Area VII ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii">http://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="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> )	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="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii</a> )		4 Component Area III ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii</a> )	4
Component Area VII ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii">http://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 Courses		6 Minor Courses (Advanced)	6
		<b>16</b>	<b>16</b>

### Fourth Year

Fall	Hours	Spring	Hours
ETEC 3376		3 ETEE 3360	3
ETEE 3345		3 ETEE 4352	3
ETEE 4351		3 ETEC 4391	3

Minor Courses (Advanced)	6 ETEC 4399	3
	<b>15</b>	<b>12</b>

**Total Hours: 120-121**

<sup>1</sup> MATH 1316 (<http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201316>) or MATH 1314 (<http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201314>) or MATH 1420 (<http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201420>) or MATH 1324 (<http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201324>) satisfies the Core Curriculum requirement for Component Area II (Mathematics) and the Degree Specific requirement. MATH 1420 will also satisfy one semester credit hour of Core Curriculum Component Area IX (Component Area Option).

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

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 and apply safety and supervisory skills related to the electronics industry.