

B.S. IN ENGINEERING TECHNOLOGY: BIOMEDICAL ENGINEERING TECHNOLOGY CONCENTRATION (AS OF SPRING 2024)

Code	Title	Hours
Bachelor of Science, Major in Engineering Technology: Biomedical Engineering Technology Concentration		
Core Curriculum (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/)		
Component Area I (Communication)		6
Component Area II (Mathematics) ¹		3
Component Area III (Life and Physical Science) ²		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) ¹		4
Degree Specific Requirement		
ENGL 3330 or MATH 3379	Intro to Technical Writing Statistical Methods in Practice	3
MATH 1410	Elementary Functions ¹	4
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
Major: Foundation		
ETDD 1361	Engineering Graphics	3
ETDD 3310 or ETEE 3313	Product Design & Development Industrial Robotics	3
ETDD 4388	3D Parametric Design	3
ETEC 1010	Engineering Foundations	2
ETEC 3367 or ETEE 3376	Engineering Materials Techn Microcontroller Applications	3
ETEC 4099	Engineering Innovation	1
ETEC 4340 or ETEE 4352	Alternative Energy Technology Instrumentation & Interfacing	3
ETEC 4384 or ETEC 4355	Supervisory Personnel Practice Agile Technology Framework	3
ETEC 4391	Work Base Mentorship	3
ETEC 4399	Senior Design	3
ETEE 1340	Introduction to Circuits	3
ETSM 3386	Industrial Safety	3
Major Concentration: Biomedical		
BIOL 1406	General Biology I	4
BIOL 2403	Human Anatomy & Physiology I ²	4
BIOL 2404	Human Anatomy & Physiology II ²	4
CHEM 1407 or CHEM 1411	Intro Organic and Biochemistry General Chemistry I	4
COSC 1436	Programming Fundamentals I	4

ETEE 2320	Circuits and Systems	3
ETEE 3345	Digital Electronics	3
ETEE 3350	Analog Electronics	3
MATH 1420	Calculus I	4
Advanced Approved Electives in Engineering Technology ³		9

Minor: Not Required⁴

Total Hours **120**

¹ MATH 1410 satisfies the Core Curriculum requirement for Component Area II (Mathematics) and the Degree Specific requirement as well as one semester credit hour of Core Curriculum Component Area IX (Component Area Option).

² BIOL 2403 and BIOL 2404 satisfy the Core Curriculum requirement for Component Area III and **must** be taken for the BMET concentration.

³ Students must seek departmental/Chair approval prior to registering for the Advanced Approved Electives in Engineering Technology.

⁴ 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 credit hours will be needed above the degree program's stated total semester credit hours.

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
Component Area I (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai)		3 Component Area I (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai)	3
Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix)		3 Component Area IV (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai)	3
ETDD 1361		3 COSC 1436	4
ETEC 1010		2 ETEE 1340	3
MATH 1410 ¹		4 MATH 1420	4
	15		17

Second Year

Fall	Hours	Spring	Hours
Component Area VI (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi)		3 Component Area VII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii)	3
CHEM 1407 or 1411		4 Component Area VIII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii)	3
ETEE 2320		3 BIOL 1406	4
PHYS 1301 & PHYS 1101		4 ETEE 3350	3
		PHYS 1302 & PHYS 1102	4
		14	17

Third Year

Fall	Hours	Spring	Hours
BIOL 2403 ²		4 Component Area V (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav)	3
ENGL 3330 or MATH 3379		3 Component Area VI (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi)	3
ETEE 3313 or ETDD 3310		3 BIOL 2404 ²	4
ETEE 4352 or ETEC 4340		3 ETDD 4388	3
		ETEE 3345	3
		13	16

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
Component Area VII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii)		3 Advanced Approved Electives in Engineering Technology ³		3 ETEC 4391	3
Advanced Approved Electives in Engineering Technology ³		6 ETEC 4399		3	
ETEC 4099		1 ETEE 4355 or ETEC 4384		3	
ETEE 3376 or ETEC 3367		3 ETSM 3386		3	
		13		12	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 Engineering Technology: Biomedical Concentration is designed to provide graduates with the following marketable skills:

- Employ effective and independent work habits and be a team player.
- Use effective oral and written communication skills.
- Solve and troubleshoot problems by thinking and analyzing critically.
- Identify and evaluate scientific literature and relevant databases to support theories/applications.
- Apply quality control to defend particular interpretations and conclusions of data.
- Demonstrate knowledge of medical device design and validation.