

# B.S. MAJOR IN ENGINEERING TECHNOLOGY: MANUFACTURING ENGINEERING TECHNOLOGY CONCENTRATION

**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: Manufacturing Engineering Technology Concentration</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 (Communications)		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)		4
<b>Degree Specific Requirement</b>		
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 Foundation</b>		
ETEC 1010	Engineering Foundations	1
ETDD 1361	Engineering Graphics	3
ETEE 1340	Introduction to Circuits	3
<b>Major</b>		
ETEC 2382	Manufacturing Processes	3
ETEC 3367	Engineering Materials Techn	3
ETEC 3374 or ETDD 3379	Time And Motion Study Industrial Design & Drafting	3
ETEC 3375	Statics	3
ETEC 4099	Engineering Innovation	1
ETEC 4340 or ETEC 3340	Alternative Energy Technology Solar and Wind Energy Systems	3
ETEC 4384	Supervisory Personnel Practice	3
ETEC 4391	Work Base Mentorship	3
ETDD 1366	Machining Technology I	3
ETDD 2366	Machining Technology II	3
ETDD 3310	Product Design & Development	3
ETDD 4380	Material Hand & Plant Layout	3
ETDD 4388 or ETDD 4339	3D Parametric Design Advanced Computer-Aided Drafting and Modeling	3
<b>Concentration: Manufacturing Engineering Technology</b>		
ETEC 4369 or ETEC 4315	Spec Topics in Industrial Tech Quality Assurance and Control	3

ETEC 4376	Strength of Materials	3
ETEC 4399	Senior Design	3
ETEE 2320	Circuits and Systems	3
ETEE 3313	Industrial Robotics	3
ETEE 4351	Automation & PLCs	3
ETSM 3386	Industrial Safety	3

**Total Hours** **121**

<sup>1</sup> If MATH 1316 or MATH 1314 are used to satisfy the Core Curriculum requirement for Component Area II (Mathematics) then an additional 3 hours in Math will be needed to meet the 120 total semester credit hour requirement.

### 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.

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### 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 ETDD 1366	3
ETDD 1361		3 ETEE 1340	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 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 II ( <a href="http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaii">http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaii</a> ) <sup>1</sup>	3
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 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
ETDD 2366		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
ETDD 3310		3 ETEC 2382	3
PHYS 1301 & PHYS 1101		4 PHYS 1302 & PHYS 1102	4
		<b>17</b>	<b>17</b>

**Third Year**

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
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
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 4340 or 3340	3
ETEC 3367		3 ETDD 4380	3
ETEC 3374 or ETDD 3379		3 ETDD 4388 or 4339	3
ETEC 3375		3	
		<b>15</b>	<b>12</b>

**Fourth Year**

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
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 ETEC 4369 or 4315	3
ETEC 4099		1 ETEC 4376	3
ETEC 4384		3 ETEC 4391	3
ETEE 2320		3 ETEC 4399	3
ETEE 3313		3 ETEE 4351	3
ETSM 3386		3	
		<b>16</b>	<b>15</b>

**Total Hours: 121**

<sup>1</sup> If MATH 1316 or MATH 1314 are used to satisfy the Core Curriculum requirement for Component Area II (Mathematics) then an additional 3 hours in Math will be needed to meet the 120 total semester credit hour requirement.

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The BS in Engineering Technology: Manufacturing Engineering Technology Concentration is designed to provide graduates with the following marketable skills:

- Knowledge and hands-on experience in various manufacturing processes such as machining, plastic processing, and 3D printing.
- Skills in product design and development and the product life cycle.
- Skills in the plant layout for high efficiency production.
- Skills in material testing and properties measurement following industrial standards.
- Automation and control of manufacturing equipment.
- Demonstrate leadership, teamwork, and effective communication skills.