# 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 |
|---|---|---|
| **Bachelor of Science, Major in Engineering Technology: Manufacturing Engineering Technology Concentration** | | |
| Core Curriculum **(**http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/**)** | | |
| Component Area I (Communications) | | 6 |
| Component Area II (Mathematics) [1] | | 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 |
| **Degree Specific Requirement** | | |
| MATH 1314 | Pre Calculus Algebra [1] | 3 |
| MATH 1316 | Plane Trigonometry [1] | 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 |
| **Major Foundation** | | |
| ETEC 1010 | Engineering Foundations | 1 |
| ETDD 1361 | Engineering Graphics | 3 |
| ETEE 1340 | Introduction to Circuits | 3 |
| **Major** | | |
| 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 |
| **Concentration: Manufacturing Engineering Technology** | | |
| 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** |

[1]    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.

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

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**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) | 4 | Component Area IV (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiv) | 3 |
| ETEC 1010 | 1 | ETDD 1366 | 3 |
| ETDD 1361 | 3 | ETEE 1340 | 3 |
| MATH 1314[1] | 3 | MATH 1316[1] | 3 |
| | **14** | | **15** |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii) | 4 | Component Area II (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaii)[1] | 3 |
| Component Area V (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav) | 3 | Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii) | 4 |
| ETDD 2366 | 3 | Component Area VI (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi) | 3 |
| ETDD 3310 | 3 | ETEC 2382 | 3 |
| PHYS 1301 & PHYS 1101 | 4 | PHYS 1302 & PHYS 1102 | 4 |
| | **17** | | **17** |

**Third 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 |
| Component Area VII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii) | 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 | | |
| | **15** | | **12** |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Component Area VIII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii) | 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 | | |
| | **16** | | **15** |

**Total Hours: 121**

[1]    If MATH 1316 (http://catalog.shsu.edu/archives/2023-2024/search/?P=MATH%201316) or MATH 1314 (http://catalog.shsu.edu/archives/2023-2024/search/?P=MATH%201314) 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.