

BACHELOR OF SCIENCE, MAJOR IN MECHANICAL ENGINEERING TECHNOLOGY

| Code | Title | Hours |
|---|---|-------|
| Bachelor of Science, Major in Mechanical Engineering Technology | | |
| 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) | | 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 Requirements | | |
| COSC 1436 | Programming Fundamentals I | 4 |
| MATH 1420 | Calculus I ¹ | 4 |
| PHYS 1301 & PHYS 1101 | General Phy-Mechanics & Heat and General Physics Laboratory I ² | 4 |
| PHYS 1302 & PHYS 1102 | Gen Phy-Snd,Lght, Elec, & Mag and General Physics Laboratory II ² | 4 |
| Major Core | | |
| ETEC 1010 | Engineering Foundations | 2 |
| ETDD 1361 | Engineering Graphics | 3 |
| ETEE 1340 | Introduction to Circuits | 3 |
| Major | | |
| ETDD 4388 | 3D Parametric Design | 3 |
| ETEC 2382 | Manufacturing Processes | 3 |
| ETEC 3367 | Engineering Materials Techn | 3 |
| ETEC 3375 | Statics | 3 |
| ETEC 4376 | Strength of Materials | 3 |
| ETEC 4378 | HVAC Systems | 3 |
| ETEC 4399 | Senior Design | 3 |
| ETEE 2320 | Circuits and Systems | 3 |
| ETEE 3360 | Electrical Power & Machinery | 3 |
| ETEE 3373 | Control Systems Technology | 3 |
| ETME 2305 | Engineering Analysis Methods | 3 |
| ETME 3376 | Engineering Dynamics | 3 |
| ETME 3378 | Applied Fluid Mechanics | 3 |
| ETME 4376 | Applied Thermodynamics | 3 |
| ETME 4385 | Mechanical Design | 3 |
| ETSM 3386 | Industrial Safety | 3 |
| Advance Major Electives | | |
| Select two of the following: | | 6 |
| ETDD 3310 | Product Design & Development | |
| ETDD 4380 | Material Hand & Plant Layout | |
| ETEC 3340 | Solar and Wind Energy Systems | |
| ETEC 3376 | Microcontroller Applications | |
| ETEC 4340 | Alternative Energy Technology | |

| ETEC 4391 | | Work Base Mentorship | |
|---|--------------|--|--------------|
| ETEE 4351 | | Automation & Control Systems | |
| Total Hours | | | 120 |
| ¹ MATH 1420 requires the following prerequisites: C or better in MATH 1410 (http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201410), or MATH 1314 (http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201314) and MATH 1316 (http://catalog.shsu.edu/archives/2021-2022/search/?P=MATH%201316) with a grade of C or higher, or high school equivalent. MATH 1410 recommended. Satisfies the Core Curriculum requirement Component Area II (Mathematics). | | | |
| 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 II (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaii) | | 3 Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii) | 4 |
| Component Area IV (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiiv) | | 3 Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix) | 1 |
| ETDD 1361 | | 3 ETEE 1340 | 3 |
| ETEC 1010 | | 2 MATH 1420 ¹ | 4 |
| | 14 | | 15 |
| 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 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 |
| COSC 1436 | | 4 ETME 2305 | 3 |
| ETEC 2382 | | 3 ETEE 2320 | 3 |
| PHYS 1301 & PHYS 1101 | | 4 PHYS 1302 & PHYS 1102 | 4 |
| | 17 | | 16 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix) | | 3 Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii) | 4 |
| Component Area VIII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii) | | 3 ETEE 3360 | 3 |
| ETEC 3367 | | 3 ETEE 3373 | 3 |
| ETEC 3375 | | 3 ETME 3376 | 3 |
| ETSM 3386 | | 3 ETME 3378 | 3 |
| | 15 | | 16 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--|--------------|---------------------------|--------------|
| Component Area V (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav) | | 3 Advanced Major Elective | 3 |
| ETEC 4376 | | 3 ETME 4376 | 3 |
| ETDD 4388 | | 3 ETEC 4378 | 3 |
| ETEC 4399 | | 3 ETME 4385 | 3 |
| Advanced Major Elective | | 3 | |
| | | 15 | 12 |

Total Hours: 120

¹ MATH 1420 requires the following prerequisites: C or better in MATH 1410, or MATH 1314 and MATH 1316 with a grade of C or higher, or high school equivalent. MATH 1410 recommended. Satisfies the Core Curriculum requirement Component Area II (Mathematics).

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 Mechanical Engineering Technology is designed to provide graduates with the following marketable skills:

- Advanced mechanical discipline knowledge.
- Application of design and analysis concepts to mechanical engineering and technology.
- Familiarity with manufacturing processes and equipment.
- Knowledge of industry standards, quality assurance, and ethics.
- Critical thinking skills.
- Ability to logically solve practical problems.