

# ACADEMIC MAP

## Mechanical Engineering Technology Bachelor of Science



First Year			Third Year		
<b>Fall</b>			<b>Fall</b>		
UNIV 1101	University Seminar I	1	ENTC 3306	Fluid Mechanics	3
ENGL 1301	Writing and Rhetoric I	3	or ENGR 3315	or Fluid Mechanics	
ENGR 1201	Introduction to Engineering	2	ENTC 4446	Control Systems I	4
CHEM 1411	General Chemistry I	4	ENTC 3308	Strength of Materials	3
MATH 2413	Calculus I	4	or ENGR 3320	or Strength of Materials	
HIST 1301	U.S. History to 1865	3	POLS 2306	State and Local Government	3
<b>Hours</b>		<b>17</b>	<b>Hours</b>		<b>13</b>
<b>Spring</b>			<b>Spring</b>		
UNIV 1102	University Seminar II	1	ENTC 3302	Manufacturing Processes	3
ENGL 1302	Writing and Rhetoric II	3	or ENGR 3350	or Manufacturing Processes	
or COMM 1311	or Foundation of Communication		ENTC 4320	Heat Transfer	3
ENGR 1312	Engineering Graphics I	3	ENTC 3455	Solid Modeling and Finite Elements	4
MATH 2414	Calculus II	4	ENTC 4330	Design of Machine Elements	3
PHYS 2425	University Physics I	4	ENTC 4210	Solid Mechanics Laboratory	2
HIST 1302	U.S. History Since 1865	3	ENTC 3220	Thermal-Fluids Laboratory	2
<b>Hours</b>		<b>18</b>	<b>Hours</b>		<b>17</b>
<b>Second Year</b>			<b>Fourth Year</b>		
<b>Fall</b>			<b>Fall</b>		
ENGR 2325	Statics	3	ENTC 4415	Project Justification and Management	4
POLS 2305	U.S. Government and Politics	3	Technical elective for MCET		3
PHYS 2426	University Physics II	4	Technical elective for MCET		3
COSC 1330	Programming for Scientists, Engineers, and Mathematicians	3	Upper Level Math, Science or Engineering Elective		3
Creative Arts Core Requirement		3	ENTC 4360	Mechanical System Design	3
<b>Hours</b>		<b>16</b>	<b>Hours</b>		<b>16</b>
<b>Spring</b>			<b>Spring</b>		
ENGR 2326	Dynamics	3	ENTC 4350	Capstone Projects	3
ENTC 2414	Circuit Analysis I	4	Technical elective for MCET		3
ENGR 3322	Materials Science	3	Language, Philosophy & Culture Core Requirement		3
ENGR 3316	Thermodynamics	3	Social and Behavioral Sciences Core Requirement		3
<b>Hours</b>		<b>13</b>	<b>Hours</b>		<b>12</b>
			<b>Total Hours</b>		<b>122</b>



# CAREER MAP

## MECHANICAL ENGINEERING TECHNOLOGY

### *Bachelor of Science*



Engineering technology focuses on the applied aspects of science and engineering to prepare graduates for practice in product improvement, manufacturing, and engineering operational functions. Engineering technologists are suited for industries that deal with application, manufacturing, implementation, engineering operation, sales, and production. The Mechanical Engineering Technology degree is offered in both the traditional face-to-face format and an online format for the upper-division courses. The fully online courses form a competency-based education program in which students receive credit for courses when specific competencies are demonstrated and receive the degree when all degree-level competencies are demonstrated. In some cases, students may be able to take traditional courses for credit in the competency-based education program. The goal of Engineering Technology is to prepare well educated, highly skilled, and socially and professionally responsible engineering technologists from a diverse population of students to create productive and rewarding careers. Graduates will be well grounded in the fundamentals of engineering, mathematics, science, communications, and problem solving. To create continuous improvement, the program uses input from employers, alumni, and the Industrial Advisory Committee. Engineering Technology is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, [www.abet.org](http://www.abet.org).

### CONTACT INFORMATION

#### Career Counselor:

Career and Professional Development  
Center | UC 304 | 361.825.2628  
[career.center@tamucc.edu](mailto:career.center@tamucc.edu)

#### Internship Coordinator:

Mayra Alvarado  
| RFEB 215 | 361.825.6025 |  
[mayra.alvarado@tamucc.edu](mailto:mayra.alvarado@tamucc.edu)

#### Department Contact:

Department of Engineering  
| RFEB 222 | 361.825.5849 |  
[mayra.alvarado@tamucc.edu](mailto:mayra.alvarado@tamucc.edu)

### ADDITIONAL PROGRAM REQUIREMENTS

A competency-based education (CBE) program is one in which specific, concrete competencies are defined. The top-level competencies are the ABET student learning outcomes listed above. Subject-specific sub-competencies are identified and assessed in each of the CBE MCET courses. When a student demonstrates the competencies for a specific course, the student passes the course. When all of the competencies for the degree have been demonstrated, the student receives the degree. The CBE MCET program is being offered for the upper-division (3000- and 4000-level) courses. Once a student has completed the first two years of the traditional MCET BS program as described below, the student may opt for the CBE MCET program. Each of the courses in the CBE MCET program, with the exception of certain laboratory classes described below, may be completed online. A student must apply for the CBE program in MCET. The student: Must be admitted as a student to TAMU-CC. Must indicate a positive decision to apply for the CBE MCET program, either through Apply Texas or a change of major form if student is already at TAMU-CC. Must have completed all core courses and all lower-division courses as listed below under "Prior Course Completion." Must have a 2.5 GPA in all coursework that applies to the program (core courses and lower-division courses that will be counted towards the program), whether taken at TAMU-CC or elsewhere. Credit By Examination: Some courses will have an online pre-test that students can take to earn college credit for that course. The test will be the equivalent of a comprehensive final exam that will test students on all competencies related to the course. The pre-test will be proctored according to the same standard as all other tests taken in the course. If students pass the pre-test, they will receive credit and not be required to take the course. The fee for taking the pre-test in each course must be paid by the student and may range up to \$300 per exam. The student should contact the office of the Department of Engineering or the Office of Distance Education and Learning Technologies at TAMU-CC to determine the exact cost of the pre-test.

### CAREER OPTIONS

- Mechanical Engineering Technologist
- Drafter
- Engineering Technician
- Mapping Technician
- Equipment Manufacturing
- Computer Manufacturing

### STUDENT ORGANIZATIONS

- Society of Hispanic Professional Engineers
- American Society of Mechanical Engineers
- Math Club
- SACNAS Chapter at Texas A&M University - Corpus Christi

### ADDITIONAL SOURCES OF INFORMATION

1. National Society of Professional Engineers
2. Society of Women Engineers
3. National Society of Black Engineers
4. American Society of Mechanical Engineers

### SKILLS/ATTRIBUTES

- Critical Thinking/Problem Solving
- Teamwork/Collaboration
- Professionalism/Work Ethic
- Oral / Written Communication
- Math
- Digital Technology

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