

MECHANICAL ENGINEERING TECHNOLOGY, Associate in Science Degree - 4700

Science Department

CIP Code: 15.0805

The Mechanical Engineering Technology AS program prepares students to enter the job market as mechanical engineering technicians working with prototype technologies, mechanical systems, and manufacturing processes. Coursework allows students to operate state-of-the-art computer-aided-design (CAD) systems, computer-numerical-controls (CNC) and programmable logic controls (PLC) systems. This program may be completed at the Harrisburg Campus through on-campus/in-person instruction.

Career Opportunities

Graduates are prepared as technicians for the mechanical engineering field. Graduates are also prepared as technicians employable in the manufacturing industry.

Competency Profile

This curriculum is designed to prepare students to:

- Effectively operate a solid modeling system and generate technical drawings
- Solve static and dynamic problems using trigonometry
- Identify properties of engineering materials, their common modes of failure and prepare technical reports
- Operate standard machine shop equipment and perform basic programming of computer-Numerical Controls (CNC) equipment, micro-controllers and Programmable Logic control (PLC) systems
- Function effectively on a team whose members together create a collaborative and inclusive environment
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CAD 154 Computer Aided Drafting & Design	3		
ENGL 104 Technical Writing	3	CVTE 208 Strength of Materials	3		
COMM 101 Effective Speaking	3	ELEC 100 Fundamental of Electricity/Electronics	1		
Humanities & Arts Core Elective	3	GTEC 104 Engineering Materials and Processes	3		
Mathematics Core Elective - <i>MATH 103 or 116</i>	3	GTEC 201 Statics	3		
Mathematics or Science Core Elective - <i>MATH 104</i>	3	GTEC 202 Statistical Quality Control	3		
Science w/ a Laboratory Core Elective	3	GTEC 208 Strength Materials Lab	1		
Social & Behavioral Sciences Core Elective	3	IA 205 Computer Numerical Control	3		
First-Year Seminar Elective - <i>ENGR 102</i>	2	MDES 201 Dynamics	3		
Wellness Elective	1	MDES 204 Product Design	3		
	27	MDES 206 Fluid Flow	3		
		MDES 207 Machine Shop Theory and Practice	1		
		<i>Students must take two courses from the following:</i>	5 or 6		
		CAD 164 Advanced Computer-Aided Drafting & Design (or)	(2)		
		ENGR 208 Microcontrollers & PLCs (or)	(3)		
		ENGR 291 Engineering Cooperative Experience	(3)		
			35		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I		Fall Semester II		Spring Semester II	
CAD 154	3	ENGL 104	3	COMM 101	3	CVTE 208	3	CAD 164 or ENGR 291	2 or 3
ENGL 101	3	ELEC 100	1	Social/Behavioral Sciences Core Elective		GTEC 202	3	ENGR 208 or 291	3
ENGR 102	2	GTEC 104	3			IA 205	3	GTEC 208	1
Humanities/Arts Core Elective	3	GTEC 201	3			MDES 201	3	MDES 204	3
MATH 103 or 116	3	MATH 104	3			MDES 206	3	Science w/ a Lab Core Elective	3
		MDES 207	1						
		Wellness Elective	1						