

# Associate of Applied Science Degree Engineering Technologies

## Mechanical Engineering Technology

The Mechanical Engineering Technology Program is designed to prepare students for immediate employment as a technician. The curriculum includes a strong emphasis on the generation of production-level computer-based documentation, analysis of form, fit and function, and design verification through testing. Graduates will be able to: (1) solve technical problems typical of those encountered in mechanical engineering technology careers using creativity, current technology, and the principles of mathematics and applied science; (2) perform and evaluate laboratory experiments, interpret and report on the results, and make recommendations for improvements; (3) work and communicate effectively in a diverse multi-disciplinary team in an industrial and academic setting; and (4) understand modern quality principles, professional issues, and the need to pursue lifelong learning.

There are two choices available to students in this degree program. Both degrees are designed to prepare students for immediate employment as a technician.

- **Mechanical Engineering Technology:** This degree is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410.347.7700, www.abet.org. It is the best choice for students wanting to pursue a four-year technology degree, or have additional analysis skills as a technician.
- **Computer Assisted Product Design Concentration:** This degree prepares the graduate to work as a technician with skills in CAD and product design. Additional courses are necessary to pursue a four-year mechanical engineering technology degree, and this degree is not accredited by the Technology Accreditation Commission of ABET.

**Certificates are also available.**

### Mechanical Engineering Technology (9440)

This concentration emphasizes the design and analysis of machine elements.

**NOTE:** CIMN 1110 has prerequisites that include prior exposure to applied technologies or successful completion of the CIM Tech Prep program. Students can take all or part of the sequence of CIMN 0950 Introduction to Machine-Tool Technology and CIMN 0960 Introduction to Machine-Tool Set-Up and CAM to gain the required knowledge and experience, if necessary. CIMN 0960 can be taken concurrently with CIMN 1110. Students with prior manufacturing experience should contact the Engineering Technologies Office to schedule proficiency exams for CIMN 0950 and CIMN 0960.

**First Semester:**

CADT 1100 . . . . .	Introduction to AutoCAD . . . . .	3
CIMN 1110 . . . . .	Manufacturing Processes I . . . . .	3
<b>ENGL 1110*</b> . . . . .	<b>English Composition I (A)</b> . . . . .	<b>3</b>
<b>OR</b>		
<b>ENGL 1111</b> . . . . .	<b>English Composition I (B)</b> . . . . .	<b>3</b>
MATH 1101 . . . . .	Technical Mathematics I . . . . .	4
MECT 1000 . . . . .	Introduction to Technology . . . . .	2
PHYS 1100 . . . . .	Applied Physics I . . . . .	3

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**Second Semester:**

CIMN 1210 . . . . .	Manufacturing Processes II . . . . .	3
ENGL 1121 . . . . .	English Composition - Technical Focus . . . . .	3
MATH 1201 . . . . .	Technical Mathematics II . . . . .	4
MECT 1600 . . . . .	Geometric Dimensioning and Tolerancing . . . . .	2
MECT 2110 . . . . .	Engineering Mechanics I . . . . .	3
PHYS 1200 . . . . .	Applied Physics II . . . . .	3

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**Third Semester:**

CADT 2100 . . . . .	Introduction to SolidWorks . . . . .	3
MECT 2210 . . . . .	Engineering Mechanics II . . . . .	3
MECT 2230 . . . . .	Strength of Materials . . . . .	3
PHYS 2100 . . . . .	Applied Physics III . . . . .	2
<b>SPCH 1050**</b> . . . . .	<b>Fundamentals of Public Speaking</b> . . . . .	<b>2</b>

**OR**

**SPCH 1150 . . . . . Fundamentals of Interpersonal Communication**

Choose course(s) from the Technical Electives list. . . . . 5

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**Fourth Semester:**

CIMN 2390 . . . . .	Fluid Power Technology . . . . .	3
CIMN 2875 . . . . .	Design and Manufacturing Capstone . . . . .	3
MECT 2500 . . . . .	Electromechanics . . . . .	2
MECT 2600 . . . . .	Design of Machine Elements . . . . .	2
QENT 1200 . . . . .	Quality Concepts and Techniques . . . . .	2
Choose course(s) from the Arts and Humanities Elective list. . . . .		3
Choose course(s) from the Social and Behavioral Sciences Electives list. . . . .		3

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**Program Total: 72**

*\*English course selection is based on placement test results (ENGL 1111 is 4 credits, only 3 credits apply to the degree).*

*\*\*Students may substitute either SPCH 1000 or SPCH 1100. One of these 3 credit courses may be required for students transferring to a four-year college.*

**Technical Electives: minimum 5 credits**

**NOTE:** Students planning to transfer to a four-year technology program are urged to take CHEM 1500 and a programming course from the following: CPET 1100, CPET 1200, and ITCS 1010

BUSM 1800 . . . . .	Essentials of Management and Supervision . . . . .	3
CADT 1500 . . . . .	Advanced AutoCAD . . . . .	3
CADT 2500 . . . . .	Advanced SolidWorks . . . . .	3
CADT 2600 . . . . .	SolidWorks Design Productivity . . . . .	3
CHEM 1500 . . . . .	General Chemistry I . . . . .	5
CIMN 2240 . . . . .	Jig and Fixture Design I . . . . .	3
CIMN 2610 . . . . .	Automation and Robotics . . . . .	3
CPET 1100 . . . . .	C Programming for Engineering Technology I . . . . .	2
CPET 1200 . . . . .	Visual Basic for Engineering Technology I . . . . .	2
ITCS 1010 . . . . .	Programming Logic . . . . .	3
MECT 2250 . . . . .	Mechanism Design . . . . .	3
MECT 2420 . . . . .	Heat Transfer . . . . .	2

**Arts and Humanities Electives: minimum 3 credits**

ARTS 1120, 2220, 2230, 2240; ENGL 2250, 2260, 2280, 2290; HUMX 1100, 1200; MUSC 1200, 2200, 2250; PHIL 1500, 2000

**Social and Behavioral Sciences Electives: minimum 3 credits**

ANTH 1160; ECON 1150, 2500, 2600; GEOG 1500, 1600, 2500; HIST 1100, 1200, 2100, 2200, 2400; POLS 1300, 2500; PSYC 1500; SOCY 1150