

# MECHANICAL ENGINEERING TECHNOLOGY

## Applied Science and Engineering Technology Division

The associate of applied science degree with specialization in mechanical engineering technology offers individuals the opportunity to prepare for rewarding and responsible careers in support of technical and engineering activities in business and industry. The mechanical engineering technology curriculum is based on engineering theory, but emphasis is placed on application, implementation skills and computer modeling. The mechanical engineering technologist is responsible for the application and implementation of engineering design methods and analysis techniques for the improvement of products, processes and systems. Coursework within the program includes automation, manufacturing processes, strength of materials, computer-aided drafting, computer-aided manufacturing, machine design, quality, and thermodynamics. The rapid increase in the complexity of technology has produced a demand for professionals who have multi-disciplined applied technical skills. Our mechanical engineering technology graduates have skills to meet that demand.

### Career Opportunities

Mechanical engineering technology graduates may seek immediate employment in industry. They will be prepared for entry-level employment in careers such as:

- Lab technician
- Mechanical design specialist
- Mechanical engineering technician
- Product designer
- Research and development technician
- Technical sales representative
- Test technician

### Transfer Information

Graduates of this program meet the minimum requirements for placement at the junior level of bachelor of engineering technology programs at many four-year institutions. Students planning to transfer to a four-year program should consult with that institution in order to insure the maximum number of courses that transfer.

Students who intend to transfer into a bachelor of science degree program in mechanical engineering technology should consider taking the calculus (MATH 171, 172) sequence and engineering physics (PHY 251, 252) sequence.

For information regarding transfer opportunities for this, or any program, please visit the Transfer section of the MCCC website.

Note: The following codes identify courses that satisfy MCCC's General Education Requirements:

- (C1) GE Natural Sciences Competency
- (C2) GE Mathematics Competency
- (C3) GE Writing Competency
- (C4) GE Computer Literacy Competency
- (C5) GE Human Experience Competency
- (C6) GE Social Systems Competency

### Credits

#### Required General Education Courses

21

C1	PHY 151 (General Physics I)	4
C2	MATH 164 (Precalculus)	4
	or qualifying scores on accepted placement test	4
C3	ENGL 151 (English Composition I)	3
C4	MDTC 160 (Mechanical Drafting and CAD I)	4
C5	Expressions of the Human Experience Competency	3
C6	Social Systems Competency	3

See the General Education Requirements on page 33 or the college website ([www.monroecc.edu](http://www.monroecc.edu)) for a list of courses that satisfy the General Education Learning Competencies.

### Credits

#### Required General Education Courses

45-47

##### 1<sup>st</sup> Semester

MDTC 160 (Mechanical Drafting and CAD I)	C4
MECH 102 (Manufacturing Processes)	4
MATH 164* (Precalculus)	C2
PHY 151 (General Physics I)	C1

##### 2<sup>nd</sup> Semester

MECH 103 (Machining Basics and CNC)	4
METC 100 (Introduction to Engineering and Technology)	3
ENGL 151 (English Composition I)	C3
ELEC 125 (Introduction to Electricity)	3
METC 170 (Introduction to Parametric CAD/CATIA)	3

##### Summer Semester

Expressions of the Human Experience Competency	C5
Social Systems Competency	C6

##### 3<sup>rd</sup> Semester

METC 160 (Math Applications in Engineering Technology)	2
METC 234 (Thermodynamics and Fluid Sciences)	4
MECH 111 (Introduction to Fluid Power)	3
CHEM 151** (General College Chemistry I)	
or MECH 131 (Introduction to Automation)	3-4
Restricted Tech Elective	3

##### 4<sup>th</sup> Semester

MATL 101 (Industrial Materials)	3
METC 220 (Statics & Strength of Materials)	4
PHY 152** (General Physics II)	
or MECH 131 (Introduction to Automation)	3-4
Restricted Tech Elective	3

\*Or take MATH 157 (College Algebra) and MATH 159 (Trigonometry and Analytical Geometry).

\*\*Chemistry Option: Take CHEM 151 (General College Chemistry I) in 3<sup>rd</sup> Semester and MECH 131 (Introduction to Automation) in 4<sup>th</sup> Semester.  
Physics Option: Take MECH 131 (Introduction to Automation) in 3<sup>rd</sup> Semester and PHY 152 (General Physics II) in 4<sup>th</sup> Semester.

#### Restricted Tech Electives (3 credits each)

MDTC 226 (Geometric Dimensioning and Tolerancing)
QSTC 115 (Statistical Process Control)
MECH 201 (Introduction to CAD/CAM)
ELEC 141 (Industrial Automation and Process Control)
ELEC 130 (Programmable Logic Controllers)
Cooperative Work Experience (Division Approval)

#### Total Degree Requirements

Total Degree Cost

66-68 credits

89 minimum billable

contact hours