

# Advanced Manufacturing and Engineering Center (AMEC)

## Creating space to meet demand



Developed with the input of industry leaders, the 31,500-square-foot learning facility features the latest technology, machinery and equipment to prepare the workforce of the future, provide current employees with cutting-edge training and meet employer demand. Faculty, students and industry work collaboratively on solutions, creating new developments, also resulting in a pipeline of skilled and talented employees.

# COUNTY COLLEGE OF MORRIS

## MECHANICAL ENGINEERING TECHNOLOGY



### CAREER OPPORTUNITIES

The average starting salary for graduates with an associate degree in mechanical engineering technology is \$48,000 - \$56,000. Students are equipped for positions in the following:

- Computer Aided Design (CAD) Designer
- Computer Numerically Controlled (CNC) Programmer
- Engineering Technician
- Project Coordinator (General)
- Mechanical Design Engineer
- Mechanical Drafter
- Production Team Leader
- Production Technician, Manufacturing
- Quality Assurance (QA) Technician
- Test Technician

### WHAT YOU WILL LEARN

The Mechanical Engineering Technology Program at County College of Morris prepares the student for positions such as a mechanical designer, engineering technician, quality assurance technician, manufacturing engineering technician and technical salesperson. The Mechanical Engineering Technology program is ideal for students interested in learning the necessary design, production and testing of machines, tools, and manufactured products for a successful career within industry and business.

The curriculum at CCM is designed to meet the needs of those seeking to gain employment as craftsmen, designers and production support specialists. Students will take core technology courses that are sequenced along with applied mathematics and science. Many of the mechanical engineering technology courses contain a laboratory component which utilizes modern test instruments and applied classroom theory for practical applications.

### WHY STUDY MECHANICAL ENGINEERING TECHNOLOGY AT CCM?

At County College of Morris, you will have access to equipment used in local industry and faculty with many years of industrial experience. The program applies to those individuals seeking employment after completing their two-year degree or those wishing to transfer into a four-year engineering technology program.

This program is through on-campus learning between lectures and laboratory with high-end computers and equipment.

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Curriculum Checksheet: [www.ccm.edu/checksheets](http://www.ccm.edu/checksheets)

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214 Center Grove Road, Randolph, NJ 07869 • 973-328-5000 • [www.ccm.edu](http://www.ccm.edu)

### CONTACT INFORMATION

**Engineering Technology and Engineering Science Department**

973-328-5760

[engtech@ccm.edu](mailto:engtech@ccm.edu)

Advanced Manufacturing and Engineering Center, Room 104







## MECHANICAL ENGINEERING TECHNOLOGY

Associate of Applied Science Degree

### General Education Foundation (20 CR)

#### COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

#### MATH/SCIENCE/TECHNOLOGY (3CR)

Computer Science I	CMP 128	3
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#### SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose a Humanities or Social Science elective from the General Education Course list. (This course must also appear on the Diversity list)		3
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#### GENERAL EDUCATION (8 CR)

Precalculus	MAT 123	4
Mathematics Elective		4

### MECHANICAL ENGINEERING CORE (40 CR)

Circuit Analysis	ELT 100	3
Computer-Aided Drafting I	ENR 117	2
Computer-Aided Drafting II	ENR 118	2
Intro to Exp and Design	ENR 132	3
Engineering Technology Project	ENR 240	3
Statics	MEC 104	3
Manufacturing Process for Engineering Technology	MEC 109	4
Intro to Advanced Manufacturing	MEC 209	3
OR		
Cooperative Work Experience-Mechanical Engineering Technology	MEC 229	3
OR		
Solar Photovoltaic and Alternative Energy Systems	ELT 250	3
Materials for Engineering Technology	MEC 110	4
Strength of Materials	MEC 141	3
Dynamics for Technology	MEC 204	2
Technical Physics I	PHY 111	4
Technical Physics II	PHY 112	4

**TOTAL 60**

## ACCREDITATION

The Mechanical Engineering Technology Program is accredited by the Engineering Technology Accreditation Commission of ABET. ([www.abet.org](http://www.abet.org))

## SCHOLARSHIP OPPORTUNITIES

In addition to the general scholarships available at the college, Glenbrook Technologies, NDIA John Amerspek, NDIA Rodney Frelinghuysen, and NDIA Dean Gallo offer scholarships.

Please contact the Department of Engineering Technology and Engineering Science for more information.

## WHERE YOU CAN GO!

This program has transfer agreements with the New Jersey Institute of Technology (NJIT). Students have transferred into other four-year colleges such as Rochester Institute of Technology (RIT) and The College of New Jersey after completing an associate's degree in mechanical engineering technology at CCM.

Note: You must see a faculty advisor to plan your sequence of courses. For the most up-to-date listing of courses, see the Curriculum Checklist for this program on the CCM website at [www.ccm.edu/checksheets](http://www.ccm.edu/checksheets).

## ENGINEERING TECHNOLOGY

Certificate of Achievement within Mechanical Engineering Technology

The Engineering Technology certificate is designed for present or future professionals who seek to improve their technical knowledge and skills in certain areas. The certificate is balanced with theory and hand-on experience.

This certificate provides a strong foundation in both electronic and mechanical theories and applications. It is possible to complete the certificate within a year and the courses fully transfer to the Electronics Engineering Technology and Mechanical Engineering Technology degrees.

### Choose any 9 credits from the following:

Manufacturing Process for Engineering Technology	MEC 109	4
Materials for Engineering Technology	MEC 110	4
Intro to Advanced Manufacturing	MEC 209	3
Digital Principles	ELT 110	3
Active Circuit Components	ELT 115	3
Electricity and Electronics	ELT 201	4
Electronic Fabrication	ELT 210	1
Computer-Aided Drafting II	ENR 118	2

### Engineering Technology Core Required Courses

Comp-Aided Draft I	ENR 117	2
Intro to Exp and Design	ENR 132	3

**TOTAL MINIMUM REQUIREMENT 14**

## ADVANCED MECHANICAL ANALYSIS CURRICULUM

Certificate of Achievement within Mechanical Engineering Technology

The Advanced Mechanical Analysis certificate is designed for present or future professionals who seek to improve their technical skills with theory and hand-on experience.

College Algebra	MAT 110	3
Statics	MEC 104	3
Strength of Materials for Engineering Technology	MEC 141	3
Machine Design	MEC 236	4

**TOTAL 13**

## ASSEMBLY AND TESTING CURRICULUM

Certificate of Achievement within Mechanical Engineering Technology

The Assembly and Testing certificate is designed for present or future professionals who seek to improve their technical knowledge and skills in certain areas. The certificate is balanced with theory and hand-on experience. This certificate provides an introduction to applications used. It is possible to complete the certificate within a year and the courses fully transfer to the A.A.S. degree in Electronics Engineering Technology.

Computer-Aided Drafting I	ENR 117	2
Intermediate Algebra	MAT 016	N3
Digital Principles	ELT 110	3
Electronic Fabrication	ELT 210	1

**TOTAL 6**



## MECHANICAL CAD CURRICULUM

Certificate of Achievement within Mechanical Engineering Technology

The Mechanical CAD certificate is designed for present or future professionals who seek to improve their technical knowledge and skills in certain areas. This certificate provides a strong foundation in Computer Aided Drafting (CAD) and in manufacturing techniques. It is possible to complete the certificate within a year and the courses fully transfer to the CAD Certificate or the A.A.S degree in Mechanical Engineering Technology.

Computer-Aided Drafting I	ENR 117	2
Computer-Aided Drafting II	ENR 118	2
Manufacturing Process for Engineering Technology	MEC 109	4
Technical Elective		3/4
Computer Technology and Applications	CMP 126	4

OR		
Intro to Exp and Design	OR ENR 132	3
Computer Concepts With Applications	CMP 135	3

**TOTAL 11/12**