



**2017-2018 PROGRAM REQUIREMENTS**  
**Degree: Associate of Applied Science**  
**Major: Mechanical Engineering Technology**

**About This Major . . .**

The objective of the Associate of Applied Science (AAS) in Mechanical Engineering Technology (MET) is to provide the knowledge necessary to aid in the design and realization of products and systems to meet the current and future needs of society. Completion of this applied engineering technology program provides graduates with the skills and knowledge for a successful transition to either a career as a mechanical engineering technician or to the Bachelor of Science program in Mechanical Engineering Technology.

The AAS in MET is designed for a student who is a doer or implementer - one who is able to apply mathematics, the natural and engineering sciences, engineering principles, and current engineering practices to the operation and testing of mechanical systems. Laboratory courses are an integral component of the MET program and are designed to develop student competence to apply experimental design methods, as well as provide a "hands-on" approach to building products and systems.

For more information on what you can do with this major, go to <http://www.coloradomesa.edu/career/whatmajor.html>.

All CMU associate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply the knowledge, techniques, skills, and modern tools of engineering to engineering problems. (Critical Thinking/Applied Learning)
2. Apply knowledge of mathematics, science, and technology to engineering problems. (Quantitative Fluency)
3. Effectively use oral, written, and graphical communication skills to address both technical and non-technical audiences. (Communication Fluency)
4. Apply the ethical standards of the discipline to engineering problems. (Specialized Knowledge)

**Advising Process and DegreeWorks**

This document is intended for informational purposes to help determine what courses and associated requirements are needed to earn a degree. The suggested course sequencing outlines how students could finish degree requirements. Some courses are critical to complete in specific semesters, while others may be moved around. Meeting with an academic advisor is essential in planning courses and altering the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for her/his intended degree(s).

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a degree and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

**Graduation Process**

Students must complete the following in the first two months of the semester prior to completing their degree requirements:

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the "Intent to Graduate" form to the Registrar's Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found at <http://www.coloradomesa.edu/registrar/graduation.html>.

If a student's petition for graduation is denied, it will be her/his responsibility to consult the Registrar's Office regarding next steps.

## **INSTITUTIONAL DEGREE REQUIREMENTS**

The following institutional degree requirements apply to all CMU Associate of Applied Science (AAS) degrees. Specific programs may have different requirements that must be met in addition to institutional requirements.

- 60 semester hours minimum.
- Students must complete a minimum of 15 of the final 30 semester hours of credit at CMU.
- 2.00 cumulative GPA or higher in all CMU coursework.
- A course may only be used to fulfill one requirement for each degree/certificate.
- No more than six semester hours of independent study courses can be used toward the degree.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed 20 semester credit hours for an AAS degree.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Degree Requirements.
- The Catalog Year determines which program sheet and degree requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for a complete list of graduation requirements.

## **PROGRAM-SPECIFIC DEGREE REQUIREMENTS**

- 62 semester hours total for the AAS, Mechanical Engineering Technology.
- A grade of "C" or higher must be achieved in achieved in coursework toward major content area.

## **ESSENTIAL LEARNING REQUIREMENTS** (15 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is an Essential Learning option and a requirement for your major, you must use it to fulfill the major requirement and make a different selection for the Essential Learning requirement.

### **Communication** (6 semester hours)

- ENGL 111 - English Composition (3)
- ENGL 112 - English Composition (3)

### **Mathematics** (3 semester hours)

- MATH 119 - Pre-Calculus Mathematics (5)  
3 credits apply to the Essential Learning requirement and 2 credits apply to Electives.

### **Social and Behavioral Sciences** (3 semester hours)

- SOCI 120 - Technology and Society (3)

### **History** (3 semester hours)

- Select one History (HIST) course (3)

## **OTHER LOWER-DIVISION REQUIREMENTS**

### **Wellness Requirement** (2 semester hours)

- KINE 100 - Health and Wellness (1)
- Select one Activity course (1)

**AAS: MECHANICAL ENGINEERING TECHNOLOGY COURSES** (45 semester hours)

- One of the following options:
  - CHEM 121 - Principles of Chemistry (4) and CHEM 121L - Principles of Chemistry Laboratory (1)
  - CHEM 131 - General Chemistry I (4) and CHEM 131L - General Chemistry I Laboratory (1)
- CSCI 130 - Introduction to Engineering Computer Science (3)
- One of the following courses with lab:
  - PHYS 111 - General Physics (4) and PHYS 111L - General Physics Laboratory (1)
  - PHYS 131 - Fundamental Mechanics (4) and PHYS 131L - Fundamental Mechanics Laboratory (1)
- ENGR 101 - Introduction to Engineering (1)
- ENGR 125 - CAD and Fabrication (3)
- ENGR 140 - First-Year Engineering Projects (3)
- ENGR 261 - Statics and Structures (3)
- MAMT 115 - Intro to Machine Shop (3)
- MAMT 251 - CNC Machining I (3)
- MAMT 255 - CNC Machining II (3)
- MATH 135 - Engineering Calculus I (4)
- MATH 136 - Engineering Calculus II (4)
- WELD 151 - Introduction to Welding (3)

**ELECTIVES** (2 semester hours)

Electives (2 semester hours of college level courses appearing on final transcript, to bring total semester hours to 62.)

- MATH 119 - Pre-Calculus Mathematics (2)

## SUGGESTED COURSE SEQUENCING

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### Freshman Year, Fall Semester: 16 credits

- ENGR 101 - Introduction to Engineering (1)
- MATH 119 - Pre-Calculus Mathematics (5)
- ENGL 111 - English Composition (3)
- ENGR 125 - CAD and Fabrication (3)
- KINE 100 - Health and Wellness (1)
- Select one History (HIST) course (3)

### Freshman Year, Spring Semester: 16 credits

- MATH 135 - Engineering Calculus I (4)
  - ENGL 112 - English Composition (3)
  - ENGR 140 - First-Year Engineering Projects (3)
  - MAMT 115 - Intro to Machine Shop (3)
  - WELD 151 - Introduction to Welding (3)
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### Sophomore Year, Fall Semester: 14 credits

- MATH 136 - Engineering Calculus II (4)
- PHYS 131 - Fundamental Mechanics (4) or PHYS 111 - General Physics (4)
- PHYS 131L - Fundamental Mechanics Laboratory (1) or PHYS 111L - General Physics Laboratory (1)
- CHEM 121 - Principles of Chemistry (4) and CHEM 121L - Principles of Chemistry Laboratory (1) OR CHEM 131 - General Chemistry I (4) and CHEM 131L - General Chemistry I Laboratory (1)

### Sophomore Year, Spring Semester: 16 credits

- CSCI 130 - Introduction to Engineering Computer Science (3)
  - MAMT 251 - CNC Machining I (3)
  - MAMT 255 - CNC Machining II (3)
  - ENGR 261 - Statics and Structures (3)
  - KINA Activity course (1)
  - SOCI 120 - Technology and Society (3)
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