2017-2018 PROGRAM REQUIREMENTS
Degree: Associate of Applied Science
Major: Manufacturing Technology
Emphasis: Computer Aided Design Technology

About This Major . . .

Through the use of freehand sketching and Computer Aided Drafting (CAD), the student will learn the techniques of basic drafting principles and methods used in today's engineering fields. Drafting concepts and the processes of orthographic projection, pictorial drawing, dimensioning, and geometric construction will be explored by hand and with CAD software and equipment. The majority of the student's work will be completed on the computer. A project in the area of the student's interest will tie the course to real world concepts.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.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 principles of grammar and vocabulary in the documentation required to perform the duties of a CAD technician (interviewing clients and communicating with constituents). (Communication Fluency)
2. Apply mathematical concepts and practices that are required to properly perform calculation for design. (Quantitative Fluency)
3. Interview clients, to help decide on materials, size and design, based on client's needs and students' knowledge of the industry. (Critical thinking)
4. Demonstrate mastery of terminology in the Engineering, Architectural, Civil and Technical drafting industry. (Specialized Knowledge)
5. Generate substantially error-free plans that define the duties of a CAD technician. Produce industry standard drawings in various platforms (Engineering, Architectural, Civil and Technical). (Applied Learning)
6. Demonstrate personal and professional ethical behavior as applied to the Computer Aided Design industry. (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/WCCC 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/WCCC.
- 2.00 cumulative GPA or higher in all CMU/WCCC 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

- 71 semester hours total for the AAS, Manufacturing Technology, Computer Aided Design Technology.
- A "C" or better must be 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)
- ☐ Select one of the following courses:
  ENGL 112 - English Composition (3)
  SPCH 101 - Interpersonal Communication (3)
  SPCH 102 - Speechmaking (3)

Mathematics (3 semester hours)
- ☐ MATH 113 - College Algebra (4)
  3 credits apply to the Essential Learning requirements and 1 credit applies to general elective credit.

Other Essential Learning Core Courses (6 semester hours)
- ☐ Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course (3)
- ☐ Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course (3)

OTHER LOWER-DIVISION REQUIREMENTS

Wellness Requirement (2 semester hours)
- ☐ KINE 100 - Health and Wellness (1)
- ☐ Select one Activity course (1)

AAS: MANUFACTURING TECHNOLOGY - COMPUTER AIDED DESIGN TECHNOLOGY REQUIREMENTS (48 semester hours)

- ☐ CADT 101 - Introduction to Computers (1)
- ☐ CONC 104 - Architectural/Civil Print Reading (2)
- ☐ CADT 106 - Computer Aided Design (3)
- ☐ CADT 107 - Advanced Computer Aided Design (3)
- ☐ CADT 108 - CAD - Mechanical (3)
- ☐ CADT 109 - CAD - Mechanical Advanced (3)
- ☐ CADT 110 - CAD Application (4)
- ☐ CADT 210 - Project (3)
- ☐ CADT 130 - CAD - Civil (3)
- ☐ CADT 135 - CAD - Civil II (3)
- ☐ CADT 140 - CAD - Architectural Theory (2)
- ☐ CADT 141 - Structural Material (3)
- ☐ CADT 142 - CAD - Residential Architecture (3)
- ☐ CADT 143 - CAD - Commercial Architecture (3)
- ☐ MAMT 101 - Introduction to Manufacturing (2)
- ☐ MAMT 105 - Print Reading/Sketching (2)
- ☐ MAMT 106 - Geometric Tolerancing (2)
- ☐ One of the following courses:
  MAMT 115 - Introduction to Machine Shop (3)
  WELD 151 - Introduction to Welding (3)

GENERAL ELECTIVES (6 semesters hours- consult with advisor)
- ☐ *MATH 113 - College Algebra (1)
- ☐ _____
- ☐ _____

Freshman Year, Fall Semester: 19 credits
- MATH 113 - College Algebra (4)
- CADT 101 - Introduction to Computers (1)
- CONC 104 - Architectural/Civil Print Reading (2)
- CADT 106 - Computer Aided Design (3)
- CADT 108 - CAD - Mechanical (3)
- MAMT 101 - Introduction to Manufacturing (2)
- MAMT 105 - Print Reading/Sketching (2)
- MAMT 106 - Geometric Tolerancing (2)

Freshman Year, Spring Semester: 17 credits
- ENGL 111 - English Composition (3)
- CADT 107 - Advanced Computer Aided Design (3)
- CADT 109 - CAD - Mechanical Advanced (3)
- MAMT 115 - Introduction to Machine Shop (3) or WELD 151 - Introduction to Welding (3)
- Social Sciences, Natural Science, Fine Arts or Humanities (3)
- General Elective (selected in consultation with advisor) (2)

Sophomore Year, Fall Semester: 17 credits
- ENGL 112 - English Composition (3) or SPCH 101 - Interpersonal Communication (3) or SPCH 102 - Speechmaking (3)
- CADT 140 - CAD - Architectural Theory (2)
- CADT 141 - Structural Materials (3)
- CADT 142 - CAD - Residential Architecture (3)
- CADT 130 - CAD - Civil (3)
- General Elective (selected in consultation with advisor) (3)

Sophomore Year, Spring Semester: 18 credits
- CADT 110 - CAD Application (4)
- CADT 210 - Project (3)
- CADT 135 - CADT Civil II (3)
- CADT 143 - CAD Commercial Architecture (3)
- Social Science, Natural Science, Fine Arts or Humanities (3)
- KINA 1XX - Activity (1)
- KINE 100 - Health and Wellness (1)