2017-2018 PROGRAM REQUIREMENTS
Degree: Technical Certificate
Program of Study: Manufacturing Technology
Specialization: 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 certificate 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. (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. (Applied Learning)
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. (Critical Thinking)
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 certificate. 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 discussing the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for her/his intended certificate.

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 certificate 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 certificate requirements (for one semester certificates complete in the first week of class):

- 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 CERTIFICATE REQUIREMENTS

The following institutional requirements apply to all CMU technical certificates. Specific programs may have different requirements that must be met in addition to institutional requirements.

- Consists of 5-59 semester hours.
- Primarily 100-200 level courses.
- At least fifty percent of the credit hours must be taken at CMU.
- 2.00 cumulative GPA or higher in all CMU coursework.
- A grade lower than "C" will not be counted toward meeting the requirements.
- A course may only be used to fulfill one requirement for each degree/certificate.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed twenty-five percent of the semester credit hours required for a technical certificate.
- 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 Certificate Requirements.
- The Catalog Year determines which program sheet and certificate 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 CERTIFICATE REQUIREMENTS

- 35-36 semester hours for the Technical Certificate in Manufacturing Technology - Computer Aided Design Technology.

TECHNICAL CERTIFICATE: MANUFACTURING TECHNOLOGY - CAD TECHNOLOGY REQUIREMENTS (35-36 semester hours)

- ☐ CADT 101 - Introduction to Computers (1)
- ☐ CONC 104 - Architect/Civil Print Reading (2)
- ☐ CADT 106 - Computer Aided Design (3)
- ☐ CADT 107 - Advanced Comp Aided Design (3)
- ☐ CADT 108 - CAD - Mechanical (3)
- ☐ CADT 109 - CAD - Mechanical Advanced (3)
- ☐ CADT 110 - CAD - Application (4)
- ☐ CADT 210 - Project (3)
- ☐ ENGL 111 - English Composition (3)
- ☐ MAMT 105 - Print Reading/Sketching (2)
- ☐ MAMT 106 - Geometric Tolerancing (2)
- ☐ One of the following courses:
  MATH 107 - Career Mathematics (3)
  MATH 113 - College Algebra (4)
- ☐ Electives (with advisor's approval, 3 semester hours)

SUGGESTED COURSE SEQUENCING

First Semester: 17-18 credits

- CADT 101 - Introduction to Computers (1)
- CONC 104 - Architectural/Civil Print Reading (2)
- CADT 106 - Computer Aided Design (3)
- CADT 108 - CAD - Mechanical (3)
- ENGL 111 - English Composition (3)
- MAMT 105 - Print Reading/Sketching (2)
- MATH 107 - Career Mathematics (3) or MATH 113 - College Algebra (4)

Second Semester: 18 credits

- CADT 107 - Adv. Computer Aided Design (3)
- CADT 109 - CAD - Mechanical Advanced (3)
- CADT 110 - CAD Application (4)
- CADT 210 - Project (3)
- Electives (with advisor's approval) (3)
- MAMT 106 - Geometric Tolerancing (2)