WESTERN COLORADO
COMMUNITY COLLEGE
A Division of Colorado Mesa University

About This Certificate . . .

Through the use of Computer-aided Manufacturing (CAM) and Computer-aided Design (CAD), the student will learn the techniques of basic drafting principles and methods used in today's manufacturing industry. Dimensioning, and geometric construction will be explored with CAD/CAM software and transferred to Computer Numerical Controlled (CNC) machines to operate machine tools and related machinery in the manufacturing and design of work pieces.

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. Use written and oral communication skills needed for entry level employment in the manufacturing industry. (Communication Fluency)
2. Apply mathematical concepts to perform machining tasks. (Quantitative Fluency)
3. Distinguish between tolerances and dimensions, as used in the machining industry. (Critical Thinking)
4. Summarize business practices, principles and application of associated technical skill in the machining in industry. (Specialized Knowledge)
5. Apply the necessary machining skill sets to perform specified manufacturing processes. (Applied Learning)
6. Determine ethical and civil responsibility necessary for employees in the machining industry. (Specialized Knowledge)

NAME: _____ **STUDENT ID #:** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ ( ) _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____20_____
Signature of Advisor Date

_____ _____20_____
Signature of the Department Head Date

_____ _____20_____
Signature of Registrar Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- 19 semester hours total
- 2.00 cumulative GPA or higher in all CMU coursework and a "C" or better must be achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Program sheets are for advising purposes only. Because a program may have requirements specific to the degree, check with your advisor for additional guidelines, including prerequisites, grade point averages, grades, exit examinations, and other expectations. It is the student's responsibility to be aware of, and follow, all guidelines for the degree being pursued. Any exceptions or substitutions must be approved by the faculty advisor and/or Department Head. Courses related to teacher licensure must also be approved by the Teacher Education Dept.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

TECHNICAL CERTIFICATE: CAD/CAM (19 semester hours)

Course No Title	Sem.hrs	Grade	Term
Core Classes			
MAMT 105 Print Reading/Sketching	2	_____	_____
MAMT 106 Geometric Tolerancing	2	_____	_____
MAMT 115 Intro to Machine Shop	3	_____	_____
MAMT 251CNC Machining I	3	_____	_____
CADT 109 CAD-Mechanical Adv.			
Or			
ENGR 125 Computer-Aided Design & Fab.	3	_____	_____
MAMT 148 CNC Applications	3	_____	_____
MAMT 255 CNC Machining II	3	_____	_____
	19		

POLICIES:
1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: During your senior year, you will be required to take a capstone exit assessment/project (e.g,, Major Field Achievement Test).