



**2014-2015 PETITION/PROGRAM SHEET**  
**Award: Technical Certificate**  
**Program of Study: Manufacturing Technology**  
**Specialization: Welding Technology**

**About This Certificate . . .**

This Welding Technology program is designed to provide training and opportunity to become proficient at SMAW, GMAW, GTAW, FCAW, OAW, OAC, PAC, CAC-A on plate and SMAW on pipe. This program offers classroom lecture and related lab work. Students study welding, cutting, layout, fabrication and technical math. Safety, attitude and quality of workmanship are stressed throughout this course. The welding certificate prepares students for entry level placement in a wide range of jobs in the welding industry and is designed to meet competency based standards set by the American Welding Society. This program trains students to become certified AWS, API, ASME welders in the welding industry.

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

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 business communication using listening, verbal and written forms that are needed for entry level employment in the industry. (Communication Fluency)
2. Apply Mathematical concepts to meet entry level employment requirements. (Quantitative Fluency)
3. Research, evaluate, synthesize and apply information/data relevant to the industry. (Critical Thinking)
4. Demonstrate knowledge of welding terminology, symbols, business practices, principles and application of associated technical Skills (Specialized Knowledge/Applied Learning)
5. Perform the necessary applied welding skill sets to fulfill the needs of entry level employment. (Applied Learning)
6. Demonstrate ethical and civic responsibility necessary for employees in the industry. (Specialized Knowledge)

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**NAME:** \_\_\_\_\_ **STUDENT ID #** \_\_\_\_\_

**LOCAL ADDRESS AND PHONE NUMBER:** \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

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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.

\_\_\_\_\_  
Signature of Advisor Date 20

\_\_\_\_\_  
Signature of Department Head Date 20

\_\_\_\_\_  
Signature of Registrar Date 20

**Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.** See the “Undergraduate Graduation Requirements” in the catalog for additional graduation information.

Degree Requirements:

- 2.00 cumulative GPA or higher in all CMU coursework
- “C” or better in each course which comprises the area of emphasis or specialization.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student’s responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student’s faculty advisor and Department Head.
- Students in Welding may be required to purchase approximately \$500.00 in tools and personal safety welding equipment. This does not include required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields. MSC / WCCC has lockers with required tools available for rent at \$ 50.00 per semester.

**Technical Certificate: Manufacturing Technology – Welding Technology** (29 Semester Hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement. Need a “C” or higher in all WELD courses.

Course No	Title	Sem.hrs	Grade	Term/Trns
CADT 101	Introduction to Computers	1	_____	_____
MAMT 105	Print Reading/Sketching	2	_____	_____
MAMT 160	Properties of Materials	2	_____	_____
MATH 107	Career Mathematics(minimum)	3	_____	_____
WELD 110	Shielded Metal Arc Welding	3	_____	_____
WELD 117	Oxy/Fuel & PAC	3	_____	_____
WELD 133	Metal Fabrication Methods	3	_____	_____
WELD 144	Welding Business Operations	3	_____	_____
WELD 211	GMAW / FCAW	3	_____	_____
WELD 230	Gas Tungsten Arc Welding	3	_____	_____
WELD 240	PIPE Welding	<u>3</u>	_____	_____

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**SUGGESTED COURSE SEQUENCING FOR THE  
TECHNICAL CERTIFICATE WITH A PROGRAM OF STUDY IN MANUFACTURING  
TECHNOLOGY, SPECIALIZATION IN WELDING TECHNOLOGY**

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student’s responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

<b>First Semester</b>			<b>Hours</b>	<b>Second Semester</b>			<b>Hours</b>
CADT 101	Introduction to Computers	1		MAMT 160	Properties of Materials	2	
MAMT 105	Print Reading/Sketching	2		MATH 107	Career Mathematics <u>OR</u>		
WELD 110	Shielded Metal Arc Welding	3			MATH 113 College Algebra	3-4	
WELD 117	Oxy/Fuel& Plasma Arc Cutting	3		WELD 211	GMAW/FCAW	3	
WELD 133	Metal Fabrication Methods	3		WELD 230	Gas Tungsten Arc Welding	3	
WELD 144	Welding Business Operations	<u>3</u>		WELD 240	PIPE Welding	<u>3</u>	
		15				14-15	

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**POLICIES:**

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the Catalog for a complete list of graduation requirements.
2. 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. 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.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. 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.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).