



2018-2019 PROGRAM REQUIREMENTS
Degree: Technical Certificate
Program of Study: Manufacturing Technology
Specialization: Welding Technology

About This Major . . .

This Welding Technology program is designed to provide training and opportunity to become proficient at SMAW, GMAW, GTAW, FCAW, OAC, PAC, blueprint reading, fabrication, layout, mathematics, and safety. 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 prepares students to become AWS certified 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)

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

- 33 semester hours for the Technical Certificate in Manufacturing Technology - Welding Technology.
- A grade of “C” or higher is required for all WELD courses.
- 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.

TECHNICAL CERTIFICATE: MANUFACTURING TECHNOLOGY - WELDING TECHNOLOGY REQUIREMENTS (33 semester hours)

- ☐ MAMT 105 - Print Reading/Sketching (2)
- ☐ WELD 110 - Shielded Metal Arc Welding (4)
- ☐ WELD 117 - Oxy/Fuel & Plasma Cutting (2)
- ☐ MATH 107 - Career Mathematics (3) or higher
- ☐ WELD 201 - Gas Metal Arc Welding (4)
- ☐ ELCE 124 - Construction Safety (1)
- ☐ WELD 133 - Fabrication & Blueprints (4)
- ☐ WELD 230 - Gas Tungsten Arc Welding (4)
- ☐ WELD 203 - Flux Cored Arc Welding (4)
- ☐ WELD 111 - Shielded Metal Arc Welding 2 (4)
- ☐ CADT 101 - Intro to Computers (1)

SUGGESTED COURSE SEQUENCING

First Semester: 16 credits

- MAMT 105 - Print Reading/Sketching (2)
- ELCE 124 - Construction Safety (1)
- WELD 110 - Shielded Metal Arc Welding (4)
- WELD 117 - Oxy/Fuel& Plasma Arc Cutting (2)
- MATH 107 - Career Mathematics (3)
- WELD 201 - Gas Metal Arc Welding (4)

Second Semester: 17 credits

- WELD 133 - Fabrication & Blueprints (4)
 - CADT 101 - Intro to Computers (1)
 - WELD 203 - Flux Cored Arc Welding (4)
 - WELD 111 - Shielded Metal Arc Welding 2 (4)
 - WELD 230 - Gas Tungsten Arc Welding (4)
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