2017-2018 PROGRAM REQUIREMENTS
Degree: Associate of Applied Science
Major: Manufacturing Technology
Emphasis: Welding Technology

About This Major . . .
This Welding Technology Degree program is designed to provide training and opportunity to become proficient at SMAW, GMAW, GTAW, FCAW, OAC, PAC, blueprint reading, pipe welding, fabrication, automation, 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 AAS degree prepares students for advanced 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.

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 business communication using listening, verbal and written forms that are needed for entry level employment in the industry. (Communication Fluency)
2. Apply Mathematical concepts for the Welding industry to meet entry level employment requirements. (Quantitative Fluency
3. Research, evaluate, synthesize and apply information/data relevant to the welding industry. (Critical Thinking)
4. Demonstrate knowledge of terminology, symbols, business practices, principles and application of associated technical skills in the industry. (Specialized Knowledge)
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 welding 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

- 65 semester hours total for the AAS, Manufacturing Technology - Welding Technology.
- A "C" or better must be achieved in coursework toward major content area.
- 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.

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)
- ☐ SPCH 101 - Interpersonal Communication (3)

Mathematics (3 semester hours)

- ☐ MATH 107 - Career Math (3) or higher

Other Essential Learning Core Courses (6 semester hours)

- ☐ Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course (3)
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OTHER LOWER-DIVISION REQUIREMENTS

Wellness Requirement (2 semester hours)

- ☐ KINE 100 - Health and Wellness (1)
- ☐ Select one Activity course (1)

AAS: MANUFACTURING TECHNOLOGY - WELDING TECHNOLOGY REQUIREMENTS (48 semester hours, must earn a "C" or better in each course)

- ☐ CADT 101 - Introduction to Computers (1)
- ☐ ELEC 124 - Electrical Safety (1)
- ☐ MAMT 105 - Print Reading and Sketching (2)
- ☐ MAMT 101 - Introduction to Manufacturing (2)
- ☐ MAMT 260 - Properties of Materials (3)
- ☐ WELD 110 - Shielded Metal Arc Welding (4)
- ☐ WELD 111 - Shielded Metal Arc Welding 2 (4)
- ☐ WELD 114 - Oxy-Fuel Welding & Brazing (2)
- ☐ WELD 117 - Oxy-Fuel & Plasma Arc Cutting (2)
- ☐ WELD 133 - Fabrication & Blueprints for Welders (4)
- ☐ WELD 201 - Gas Metal Arc Welding (4)
- ☐ WELD 230 - Gas Tungsten Arc Welding (4)
- ☐ WELD 240 - Pipe Welding (4)
- ☐ WELD 203 - Flux Cored Arc Welding (4)
- ☐ WELD 275 - Automation (4)
- ☐ Choose one of the following Restricted Electives:
  - CADT 108 - Computer Aided Design-Mechanical (3)
  - MAMT 115 - Introduction to Machine Shop (3)
  - TSTG 150 - Fluid Power (3)
  - TSTG 220 - Workplace Skills (3)

SUGGESTED COURSE SEQUENCING

Freshman Year, Fall Semester: 16 credits

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

Freshman Year, Spring Semester: 17 credits

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

Sophomore Year, Fall Semester: 16 credits

- ENGL 111 - English Composition (3)
- KINE 100 - Health and Wellness (1)
- KINA 1XX - Activity (1)
- WELD 114 - Oxy-Fuel Welding & Brazing (2)
- MAMT 101 - Introduction to Manufacturing (2)
- WELD 240 - Pipe Welding (4)
- Social Sciences, Natural Science, Fine Arts, or Humanities (3)

Sophomore Year, Spring Semester: 16 credits

- SPCH 101 - Interpersonal Communications (3)
- MAMT 260 - Properties of Materials (3)
- WELD 275 - Automation (4)
- Social Sciences, Natural Science, Fine Arts, Or Humanities (3)
- Restricted Electives (3)
