

SHIELDED METAL ARC WELDING

Technical Certificate

About the Shielded Metal Arc Program

This certificate is offered for individuals interested in pursuing the skills necessary to be a successful welder in the Shielded Metal Arc Welding process. Students will learn how to interpret prints and weld symbols prior to engaging in the weld process using various metal types including carbon steel, stainless steel, and aluminum. They will also perform the thermal cutting processes during this educational experience.

PROGRAM OUTLINE

SEMESTER: 1		
Course #	Course Title	Credits
10442112C01	Print Interpretation and Weld Symbols Students will develop print interpretation skills needed in metal fabrication. Learners study prints containing section views, detail views, and weld symbols. Learners apply concepts in hands-on activities, print interpretation skills, calculating dimensions, identifying and interpreting weld symbols.	1.00
10442158C01	Shielded Metal Arc Welding on Carbon Steel Students will develop skills in shielded metal arc welding. Learners use 6010 and 7018 "stick" electrodes to complete fillet and groove welds in all positions. Weld quality is assessed per AWS D1.1 Structural Steel Code. Prerequisite(s): 10442172C00 Safety in Manufacturing (B or better) (concurrent enrollment allowed).	1.50
10442158C02	Shielded Metal Arc Welding AWS Testing on Carbon Steel Students will perform AWS bend test and AWS entry level fabrication project using the SMAW welding process. Learners will complete these welds and weldments conducted per AWS D1.1- Structural Steel Code.	0.50
10442163C01	Weld Inspection and Testing Emphasizes measurement of weld defects and assessment of weld quality conformance to common welding codes. Learners conduct visual inspections, Die Penetrant and bend test on welds. The process of procedure and welder qualification is explored.	1.00
10442173C01	Thermal Cutting Develops skill in thermal cutting and gouging processes. Learners practice manual and machine oxy-fuel cutting, plasma cutting and gouging and air carbon arc gouging. Prerequisite(s): 10442172C00 Safety in Manufacturing (B or better) (concurrent enrollment allowed).	1.00

Total Credits: 5.00

Talk with an Academic Advisor about the program outline. Together, you will determine if credits you've already earned satisfy any requirements, discuss possible alternative courses, and choose the best classes if you're thinking of transferring.

AT A GLANCE

Flexible Options



ON CAMPUS ONLINE CLASSES MULTIPLE START DATES PERSONALIZED PACE

2019 Start Dates

January 16	April 15	September 9
February 4	June 6	October 7
March 4	July 1	November 4
April 1	September 4	

2020 Start Dates

January 8	March 2	June 1
January 15	May 8	July 6
February 3	May 11	

What is Competency-Based Education?

Competency-Based Education (CBE) is learning at your own pace by mastering competencies through demonstration. Once all competencies for a program have been assessed and mastered, students will earn a certificate, diploma, or degree.

[LEARN MORE ABOUT CBE](#)

What You'll Learn

- Print interpretation and weld symbols
- Weld inspection and testing
- Shielded metal arc welding on carbon steel
- Shielded metal arc welding AWS testing on carbon steel
- Thermal cutting

Student Equipment

Students are required to purchase welding kits through the college bookstore or obtain the minimum tools and equipment listed to be able to successfully complete coursework and performance assessments in the welding lab.

- Safety glasses
- Welders gloves MIG and TIG
- Chipping hammer
- Welding beanie
- 8-way welder pliers
- Soapstone holder
- Triple flint spark lighter
- Tape measure
- Weld fillet gauge
- Mag tool
- Material handling gloves
- Backhand pad
- Tool bag
- Welder pencils
- Auto darkening helmet
- Lens cover

- Welding jacket

Your Potential Careers

- Production Welder
- Maintenance Welder
- Welding Sales and Service
- Self-Employment

Get Started

Your application can be submitted online, it takes just a few minutes to complete.

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