NICOLET COLLEGE

Shielded Metal Arc Welding

Technical Certificate

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

TERM 1

Course #	Course Title	Credits
1044215700	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: 1044217200 Safety in Manufacturing (B or better).	2.00
1044215800	Shielded Metal Arc Welding on Carbon Steel 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: 1044217200 Safety in Manufacturing (B or better).	2.00
1044216300	Weld Inspection and Testing Emphasizes measurement of weld defects and assessment of weld quality conformance to common welding codes. Learners conduct etch tests, bend tests and break tests on welds. The process of procedure and welder qualification is explored through group activities.	1.00
3144210100	Weld Symbols This course provides a comprehensive introduction to weld symbols used in welding, fabrication, manufacturing, and engineering drawings. Students will learn how to read, interpret, and apply standard welding symbols in accordance with industry codes and drafting practices. Topics include reference lines, arrow and other side symbols, fillet and groove weld symbols, supplementary symbols, finish symbols, dimensions, weld locations, and welding notes. Through practical exercises and drawing interpretation, participants will develop the skills needed to accurately communicate welding requirements, inspect weld specifications, and ensure quality and consistency in fabrication projects.	1.00

Total Credits: 6.00

Talk with a Success Coach 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

How You'll Learn

Next Academic Start Dates

11
JAN

Spring 2027 Term Starts

15
MAR

Additional Spring 2027 Start for Select Courses

VIEW FULL CALENDAR

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

Program Tuition*

$1,643

Books & Supplies*

$387

*Total cost for degree completion is estimated by current course requirements, books, and supplies. Tuition and fees are set by the Wisconsin Technical College System and subject to change.

Not Eligible for Financial Aid

▸ Potential Indirect Costs

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

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

Your Potential Careers

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

Median Annual Salary

$39,085	$42,437	$41,198
Local	State	National

EMSI 2020.1

Get Started

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

APPLY NOW