INTEGRATED METALS: SHIELDED METAL ARC WELDER - CERTIFICATE

Overview

See Department website and program contacts here (https://www.mhcc.edu/education-options/degrees-certificates/integrated-metals/shielded-metal-arc-welder/index/)

The **Integrated Metals: Shielded Metal Arc Welder certificate** is designed for students seeking specialized skills in shielded metal arc welding (SMAW), commonly known as stick welding or manual metal arc welding. The curriculum provides hands-on technical training in welding techniques widely used in construction, fabrication, and industrial environments.

Coursework includes topics such as **shielded metal arc welding processes, welding safety, metal preparation, welding procedures, and fabrication techniques**. Students develop practical technical skills using electric arc welding equipment and industry-standard welding practices.

The Integrated Metals: Shielded Metal Arc Welder certificate is workforce-focused and prepares students for welding and fabrication opportunities requiring SMAW/stick welding skills.

This program is designed for **fall term entry only**.

Students are encouraged to work with an advisor (https://www.mhcc.edu/student-resources/academic-advising/) to ensure appropriate course selection and program planning based on their educational background and career goals.

Refer to the tabs above for additional information about:

- **Education Plan** – provides a sample term-by-term sequence of courses
- **Career Info** – includes information on potential occupations, employment trends, and earnings

Program Learning Objectives

At the completion of this program, students should be able to:

- Demonstrate safety procedures and safety inspections for welding processes and related equipment
- Identify welding equipment and accessories and explain power source principles of operation\\n
- Read, interpret and apply blueprint specifications for the production and inspection of manufactured work pieces
- List and perform set-up, adjustments and operations of welding and oxy-fuel cutting equipment in the preparation and completion of welding practice plates
- Describe and perform welding processes
- Describe and apply the variables and techniques used to weld carbon steel to blueprint specifications with regard to joint types, weld types and positions of welding
- Visually examine welds for discontinuities, defects, correct weld size and placement, providing solutions for welding procedure errors
- Produce acceptable test plate weldments according to American Welding Society (AWS) code specifications

Education Plan

This sample Education Plan illustrates one possible course sequence. Students should consult an advisor (https://www.mhcc.edu/student-resources/academic-advising/) to create a personalized plan.

What are the employment opportunities?

This program will assist the student preparing for welder qualification testing and provide testing opportunities for welder certification to American Welding Society code standards in one or more positions and processes, providing the skill credential for entry into a position in industry as a certified welder or a position upgrade with their present employer.

Code	Title	Credits
IMTL120	SMAW (Shielded Metal Arc Welding/Stick) Theory	2
IMTL121	SMAW (Shielded Metal Arc Welding/Stick) Lab	3
IMTL124	Blueprint Reading for Welding Applications	3
IMTL152	Welding Processes and Procedures	2
IMTL163	Welding Certification Preparation Lab	3-4
or IMTL143	CNC Cutting	
IMTL171	Welding Certificate Program Lab I	1
IMTL172	Welding Certificate Program Lab II	1
IMTL173	Welding Certificate Program Lab III	1
Total Credits		**16-17**

Awarding Requirements

The following requirement(s) must be fulfilled to be awarded the Integrated Metals: Shielded Metal Arc Welder certificate:

- All core program courses (IMTL) must be completed with a grade of "C" or higher.
- All core program courses (IMTL) must be completed within five (5) years of starting the program.

Career Information

Explore potential careers related to this program, including typical job roles, employment trends, and projected growth. This information can help you better understand how your education may align with future career opportunities.