

INTEGRATED METALS: ACCELERATED WELDING TECHNOLOGY (VESL) - CERTIFICATE

Overview

See Department website and program contacts here (<https://www.mhcc.edu/education-options/degrees-certificates/integrated-metals/accelerated-welding-technology/index/>)

The **Integrated Metals: Accelerated Welding Technology (VESL) certificate** is designed for English language learners seeking foundational welding and workplace communication skills. The curriculum combines hands-on welding instruction with workplace English development to prepare students for entry-level opportunities in welding and manufacturing environments.

Coursework includes topics such as **welding processes, shop safety, fabrication fundamentals, technical communication, and workplace English skills**. Students develop practical technical abilities while strengthening communication skills used in industrial and manufacturing settings.

The Integrated Metals: Accelerated Welding Technology (VESL) certificate is workforce-focused and prepares students for entry-level employment and continued training in welding and related trades.

All core courses must be completed within five years in order for the certificate to be awarded.

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 manual welding and cutting equipment and accessories and explain power source principles of operation
- Read, interpret and apply blueprint specifications and weld symbols for the production and inspection of manufactured work pieces
- List and perform set-up, adjustments and operations of manual welding and oxy-fuel cutting equipment in the preparation of welding practice plates
- Describe and perform welding and cutting processes as they relate to ferrous metals
- Identify various electrodes, filler wires, shielding gasses and current types and their relationship to base-metal varieties

- Describe and apply the variables and techniques used to weld carbon steel and aluminum 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.

Note: Students are required to maintain a minimum grade of “C” in all IMTL courses. The VESL/Accelerated Welding Technology program is not financial aid eligible. However, the related degree program, Integrated Metals AAS and the Welding Technology Certificate are aid eligible.

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
IMTL128	GTAW (Gas Tungsten Arc Welding/ TIG) Theory	2
IMTL129	GTAW (Gas Tungsten Arc Welding/ TIG) Lab	3
IMTL140	GMAW/FCAW (Gas Metal and Flux Cored Arc Welding/Wire Feed) Theory	2
IMTL141	GMAW/FCAW (Gas Metal and Flux Cored Arc Welding/Wire Feed) Lab	3
IMTL155	Industrial Safety	3
IMTL171	Welding Certificate Program Lab I	1
IMTL172	Welding Certificate Program Lab II	1
IMTL173	Welding Certificate Program Lab III	1
Total Credits		24

Awarding Requirements

The following requirement(s) must be fulfilled to be awarded the Integrated Metals: Accelerated Welding (VESL) certificate:

- All core program courses (IMTL, MFG) 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.