

INTEGRATED METALS: ACCELERATED WELDING TECHNOLOGY (VESL) - CERTIFICATE

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| 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 |

Career Pathway Certificate of Completion

Faculty Adviser

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This program is reserved for students learning English (<https://mhcc.edu/education-options/degrees-certificates/integrated-metals/accelerated-welding-technology/get-started/>). Courses in the program help students learn welding skills, while also improving their workplace English skills.

All core courses must be completed within 5 years in order for the certificate to be awarded.

Program Outcomes

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

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 |
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| 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 |