

# WELDING

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## Overview

**Degrees Offered:** AAS, Diploma, Program Certificate

**Limited Enrollment:** Yes

**Program Begins:** Fall

**Delivery Method:** On Campus

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## Description

The one-year Welding program provides students with the skills for an entry-level job or apprenticeship program. Students spend most of their time in a modern, well-equipped lab practicing different welding techniques, such as oxyacetylene, gas tungsten arc, flux cored arc, shielded metal arc, and gas metal arc. In shielded metal arc welding, students will develop the skills required to pass the Certified Welder test of the American Welding Society. Enrollment is limited to available space beginning in the fall. A third semester of advanced welding courses are available to interested students.

## Preparation

A background in the following areas is helpful: basic math, metrics (conversion), geometry, trigonometry, and basic drafting. Courses in physics, chemistry, electricity, and computer technology are useful and some knowledge of metallurgy. Welders need good eyesight, hand-eye coordination, manual dexterity, and the ability to concentrate on detailed work for long periods of time. Students should be physically fit and able to work in a variety of positions.

Awareness of the following technical standards may help students determine suitability for this career:

- Noise level in the work environment is usually high.
- Requires good manual dexterity, color vision, and hearing, and the ability to communicate.
- Requires continuous walking, standing, bending, stooping, climbing stairs and ladders, kneeling, lifting and carrying up to 50 pounds, reaching above and below shoulder level, and occasional sitting, crawling, lifting 100 pounds from knee to shoulder, and pushing/pulling up to 25 pounds.
- Specific vision abilities include close vision, depth perception, and ability to adjust focus.
- Continuous exposure to noise; frequent exposure to dirt, dust, fumes, chemicals, and extreme heat and cold; and occasional exposure to vibration, poor ventilation, and confined areas. Respiratory concerns should be discussed with an instructor.

## Requirements

Students who complete the curriculum requirements earn a Program Certificate. Additional coursework may lead to a Diploma and/or Associate in Applied Science degree.

## Career Opportunities

Skilled welders are in great demand. Six in ten welders work in manufacturing. Jobs are concentrated in fabricated metal products, transportation equipment, machinery, architectural and structural metals, and construction. Welders can advance to more skilled jobs with additional training and experience to become welding technicians, supervisors, inspectors, or instructors. Some experienced welders open their own shops.

## Degree Plans

- Welding Associate in Applied Science
- Welding Diploma
- Welding Program Certificate

## Program Learning Outcomes

Upon graduation, Welding students will be able to:

- Technical Knowledge: Oxy-Fuel Cutting/Heating/Welding
- Technical Knowledge: Shielded Metal Arc Welding
- Technical Knowledge: Gas Metal Arc Welding
- Technical Knowledge: Flux Cored Arc Welding
- Technical Knowledge: Gas Tungsten Arc Welding