MOLINE-COAL VALLEY
SCHOOL DISTRICT

Welding Career Pathway

Background

The nation, and particularly our manufacturing-heavy community, are faced with an aging skilled worker population and too few programs to develop new talent. Arconic Foundation Treasurer Ryan Kish noted at a national manufacturing summit that starting with early education and practical application of skills can help the industry and provide a tremendous career opportunity for our students. "All we're doing right now [as an industry] is fighting over the same scarce talent. Take the opportunity to make an investment in early STEM education to build the pipeline, so you're not dealing with the same problem in 5 and 10 years."

The Moline-Coal Valley School District and local manufacturing industry partners are doing just that by providing school-based coursework, coupled with industry-based on the job training through a Federal Department of Labor paid apprenticeship opportunity.

Facts

Welding is a growing field throughout the country, but our community has a particular need to replace retiring workers in the field of welding and other skilled labor positions. According to the ETI School of Skilled Trades, Illinois is one of the best places to find a welding job…, [as] two out of five welders work in…six states, [including] Illinois."

Program Purpose

- To identify, train, and develop high school students interested in a welding career or career in which welding skills are essential;
- To collaborate with local industry leaders and the Federal Department of Labor in training standards and curriculum development, intent on providing the highest standard of industry employment preparation
- To create a pipeline of Moline-Coal Valley graduates to be hired within the Quad City community
- To serve as a conduit for our Quad City community business partners in need of a skilled and diverse employee talent pool

Program Benefits

- Training, experience, and employability in a high-demand field
- Nationally-recognized certification upon completion of the DOL apprenticeship
- Acquisition of dual and articulated credit toward an AA degree from Black Hawk College
- Paid work from the summer following 11th grade through apprenticeship completion
- Fast-tracking the development of a lucrative and diverse career field

Welding Curriculum Overview

Sophomore Course: Welding 1

This full year curriculum is a welding course for the beginner. The course covers the basic arc welding process and provides the fundamentals and skills necessary to produce quality welds. All types of welding joints are covered and welds are made in the flat & horizontal positions. Special attention is given to the safety habits for both types of welding, welding rod classification and welding machine settings.students. The course is designed essentially to train persons for further skill development in the field of industrial welding. It is also a course of interest to students interested in the mechanical engineering degree because of its involvement with metallurgy and the science of joining metals using the welded fabrication process. It may interest some students avocationally through hobby interest into joining of metals into varying
art forms.

Junior Courses: Welding 2

Welding 2 students will become familiar with metallic inert gas welding. The course also allows the student to observe the test of their work in the tensile and compression tester to determine the strength of their welds. This is a general education course of interest to all students. The course is designed to train persons for further skill development in the field of industrial welding. It is also a course of interest to students interested in a mechanical engineering degree because of its involvement with metallurgy and the science of joining metals using the welded fabrication process. It may interest some students through hobby interests into joining metal into various art forms.

Senior Course: Advanced Welding

The Advanced Welding class will allow the students to gain a greater understanding of production welding in all areas. The student will learn advanced applications of mig welding for more complex parts to be created in a production setting. The welder will learn advanced set-ups, weld symbols, blueprint reading, maintenance, mass production, and inspection of the part being produced. The student should be concurrently be enrolled in the Welding Apprenticeship course, where the advanced curriculum supports the student's work experience with a local welding company. Occupational goals are to be able to do the welding tasks that are required on a day to day basis at the local companies.

Apprenticeship

The DOL paid apprenticeship focuses on applying skills learned at MHS to the factory setting. Instruction for this course will take place outside the school setting at an industry location in the greater Quad City area. Students will be selected for this course through an application and pairing process near the end of the junior year, and on-the-job work experience and training will begin as a full-time summer job between the junior and senior years. This placement will continue through the senior year for course credit. Students should anticipate the full apprenticeship experience to take 1-2 years beyond high school graduation to complete, depending on student competency acquisition.

Our Partners

Black Hawk College

McLAUGHLIN BODY COMPANY, INC

JOHN DEERE