

Career & Technical Course Offerings through the College Express Program

Welding

The Welding course is offered during afternoon College Express. Welding is the most common way of permanently joining metal parts. In this process, heat is applied to metal pieces, melting and fusing them to form a permanent bond. Because of its strength, welding is used in shipbuilding, automobile manufacturing and repair, aerospace applications, and thousands of other manufactured products. Welding is also used to join beams when constructing buildings, bridges and other structures, and to join pipes in pipelines, power plants, and refineries. Types of welding include manual welding, semi-automatic welding and automated welding. The work of arc, plasma, and flame cutters is closely related to that of welders. However, instead of joining metals, cutters use the heat from burning gases or an electric arc to cut and trim metal objects to specific dimensions.

Job prospects should be excellent for welders with the right skills, as many employers report difficulties in finding qualified applicants. Students enrolled in the Welding program can earn college credit during high school and will take the following classes if they complete both years of the program:

WELD 180 Structural Welding (Fall) 4 hours

This course is offered to first year Welding students. Electric arc welding processes are discussed. Flat, horizontal, vertical and overhead positions will be stressed. Alloying elements and their uses in various steel will be covered.

WELD 280 Pipe Welding (Spring) 4 hours

This course is offered for first year Welding students. Develops skills in the technique of SMAW pipe welding. Pipe welding practices in the horizontal (2G), vertical (5G), and 45 degrees (6G) positions. Fillet welds of pipe are covered. Prerequisites: WELD 180 Structural Welding.

WELD 170 Cutting and Material Preparation (Spring) 4 hours

Designed to provide an opportunity to learn skills and the fundamental knowledge in the cutting and preparation of Mild Carbon Steel, Stainless Steel, Cast Iron, and Aluminum, Oxy-Acetylene, Plasma, Arc welding and safety. Instruction will be given covering brazing case iron welding and flame cutting. Emphasis will also be given to vertical weldments and the proper method of welding non-ferrous metals.

WELD 290 Advanced Pipe Welding (Fall) 4 hours

This course is offered for second year Welding students. Develops skill in the technique of GTAW (Tig) and SMAW (stick) pipe welding. Pipe welding practices in the horizontal (2G), vertical (5G), and 45 degrees (6G) positions. Fillet welds of pipe are covered. Prerequisites: WELD 180 and WELD 280.

WELD 270 Welding for Manufacturing (Spring 20) 4 hours

This course is offered for second year Welding students. The student will learn the GMAW (MIG), FCAW (flux-cored), and GTAW (TIG) welding techniques applicable to manufacturing industry on carbon steel, stainless steel, and aluminum.

WELD 101 Blueprint Reading (Mech.) (Spring 21) 4 hours

Fundamentals of blueprint reading as applied to the mechanical trades. Students work with actual drawings. This course should not be taken by students enrolled in DRAF 160.

****If a student enrolls in a dual-enrollment English class AND a dual-enrollment Tech Math (132 and 133 or higher) class (or the Summer Tech Math course) and completes the two year College Express Welding program they can also earn an "Advanced Welding Certificate" when they graduate from high school.**

Education for Employment 400

VVEDS

Vermillion Vocational Education Delivery System

