Rev Fall 2024

# CFISD Welding I

Scope and Sequence

**Course Description:** This Career and Technical course is for students interested in Welding as a career. Training for employment with entry-level skills in welding trades will be emphasized. Instruction follows an industry-standard curriculum, and students' certifications are listed in a national registry upon successful completion. Oxyfuel welding and cutting, plasma arc cutting, shielded metal arc welding, gas metal arc welding, flux cored arc welding, and gas tungsten arc welding will be covered. Hand and power tools, welding on various types of metals, reading blueprint welding symbols, metal characteristics, and equipment setup are other areas that students master. Safety, leadership, entrepreneurship, and career opportunities are included. (*2 credits*)

- Grades 10-12
- Recommended prerequisite: Principles of Manufacturing or Agricultural Mechanics and Metal Technologies
- A letter of interest may be required if demand exceeds number of available slots.

**TEKS**

Program of Study: *Manufacturing*

Cluster: *Manufacturing*

Endorsement: *Business & Industry*

- Meets advanced course requirement (Y / N): *No*
- Meets foundation requirement for math, science, fine arts, English, LOTE (Y/N): *No*

Industry Certifications offered (Y/N): *AWS Welding Certification(s)*

| Instructional Units | Pacing |
|---|---|
| **1st Semester**<br>Basic Safety<br>Oxy-fuel Cutting<br>Basic math<br>Introduction to Hand Tools<br>Introduction to Power Tools<br>SMAW Equipment and Set-up<br>Introduction to Blueprints<br>Electrodes and Selection<br>Welding Positions / Welding Joints / Base Metal<br>Weld Quality<br>SMAW Beads and Fillet Welds | 1st Grading Period<br><br><br><br><br><br>2nd Grading Period |
| **2nd Semester**<br>SMAW Groove Welds 1G/2G/3G/4G<br>SMAW Groove Welds with Backing<br>SMAW Groove Welds without Backing<br>SMAW Open V-butt welds<br>SMAW Groove Welds | 3rd Grading Period<br><br><br>4th Grading Period |

Primary Instructional Materials: *CFISD Safety Curriculum, ICEV Multimedia LTD. Web Based curriculum*