

CFISD Welding I

Scope and Sequence

Endorsement: Business & Industry

Cluster: Manufacturing

Meets advanced course requirement? NO

Program of Study: Welding

Meets foundation requirement for math, science, fine arts, English, LOTE? NO

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.

TEKS link

- 2 credits
- Grades 10-12
- Lab supplies or fee may be required
- Recommended prerequisites: Principles of Manufacturing **or** Agricultural Mechanics

Industry Certification/Credential: AWS D1.1

TEA recognized IBC (to count toward program of study completion)? YES

Instructional Units	Grading Period
Basic Safety Oxy-fuel Cutting Basic math Introduction to Hand Tools & Power Tools SMAW Equipment and Set-up Introduction to Blueprints	N1 (fall)
Electrodes and Selection Welding Positions / Welding Joints / Base Metal Weld Quality SMAW Beads and Fillet Welds	N2 (fall)
SMAW Groove Welds Certification Testing	N3 (spring)
SMAW Open V-butt welds	N4 (spring)

Primary Instructional Materials: NCCER Welding Volume 1 & 2

Supplementary Instructional Materials: AWS Certification Materials