PROGRAM DESCRIPTION
The Welding Technologies program prepares students to acquire welding techniques and be product verified with weldment testing. They will develop a working knowledge of blueprint reading, and the welding processes for Shielded Metal ARC Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored ARC Welding (FCAW), and Gas Tungsten ARC Welding (GTAW) with the use of thermal cutting equipment. Students will learn about the tools and equipment for the welding trade.

The Welding Technologies program is delivered as a 2-year coherent sequence of courses designed to offer students knowledge and skills that meet the needs of today’s workforce. Students experience pedagogy in technical instruction, academic foundations, experiential learning, work-based learning, leadership, and personal development. The Professional Skills developed by business and industry leaders across Arizona are integrated throughout the Welding Technologies program. Students learn how to get along with their team members, make critical decisions, solve problems, develop respect, and to be successful in their chosen occupation. Students also develop leadership, social, civic, and career skills through their participation in the state-recognized Career and Technical Student Organization, SkillsUSA.

The Welding Technologies instructional program prepares students for entry-level employment, further training, and/or post-secondary education for these and other occupations: Construction Welder, Shipyard Welder, Metal Cutters, Automated Welder Operator, Structural Iron and Steel Worker, Pipefitter, Boilermaker, Aerospace, Agriculture, Automotive, Chemical Processing, and Manufacturing

INDUSTRY CERTIFICATIONS
The following industry credentials have been approved for the A-F CCRI and may be appropriate for the Welding Technologies instructional program:

- Amatrol
- American Welding Society Certification (AWS)
- Autodesk Certified User (ACU) 3ds Max
- CAD-CAM*
- Certified SolidWorks Associate (CSWA)
- Certified SolidWorks Professional (CSWP)
- Manufacturing Skill Standards Certification (MSSC)
- Master CAM
- Mechatronics
- National Institute for Metalworking Skills (NIMS)
- NCCER Core
- NCCER Welding
- OSHA 10 Construction Industry
The following credentials have been approved to meet CTED eligibility for the Welding Technologies instructional program:

- Certified Welder (AWSJ) SENSE
- Gas Metal Arc Welding Certificate
- NCCER Sheet Metal
- Shielded Metal Arc Welding Certificate Autodesk Certified User (ACU) Maya
- Welding Technology

**COHERENT SEQUENCE**

48.0508.10 - Welding Technologies I, **and**

48.0508.20 - Welding Technologies II, **and program may elect to add:**

48.0508.25 - Welding Technologies III, **or**

48.0508.40 - Welding Technologies IV, **or**

48.0508.70 - Welding Technologies – DCE (Diversified Cooperative Education) **or**

48.0508.75 - Welding Technologies - Internship **or**

48.0508.80 - Welding Technologies – Cooperative Education
TEACHER CERTIFICATION REQUIREMENTS
CAREER PREPARATION: The instructor must be ADE/CTE certified according to the following Certificates, PCTIET, SCTIET, and SSCTEIET.

Note:
• Welding Technologies 48.0508.70 may be a part of the sequence and the teacher must hold a Cooperative Education Endorsement (CEN).
• Teacher/Coordinator, 48.0508.75 is not required to have a Cooperative Education Endorsement (CEN).
• Teacher/Coordinator, 48.0508.80 is required to have a Cooperative Education Endorsement (CEN).

CERTIFICATE TYPES
PCTIET Provisional Career and Technical Education Industrial and Emerging Technologies
SCTIET Standard Career and Technical Education Industrial and Emerging Technologies
SSCTEIET Standard Specialized Career and Technical Education Industrial and Emerging Technologies