

Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

Welding



The Welding program of study focuses on the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to modify parts to make or repair machine tools or maintain individual machines, and how to use hand-welding or flame-cutting equipment.

Secondary Courses for High School Credit

Level 1

- Introduction to Welding

Level 2

- Welding I ¹

Level 3

- Welding II

Level 4

- Practicum in Manufacturing - Welding



Postsecondary Opportunities

Associates Degrees

- Certified Welder or Welder Inspector
- Machine Shop Technology/Assistant
- Operations Management and Supervision
- Occupational Safety

Bachelor's Degrees

- Welding Engineering Technology/Technician
- Operations Management and Supervision
- Environmental Health

Master's, Doctoral, and Professional Degrees

- Welding Engineering Technology/Technician
- Operations Management and Supervision

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate and compete in SkillsUSA
- Join the American Welding Society

Work-Based Learning Activities

- Work in a local business or industry apprenticeship
- Job shadow a machinist

Industry-Based Certifications

- AWS D1.1 Structural Steel ¹
- AWS D9.1 Sheet Metal Welding ¹
- AWS SENSE Level 1: Entry Welder ¹



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$50,600	6,800	23%
Welding Soldering and Brazing Machine Setters, Operators and Tenders	\$43,400	300	12%

Successful completion of the Welding program of study will fulfill requirements of the Business and Industry endorsement. Revised – January 2023

Welding Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE LEVEL(S)
Introduction to Welding	13032250 (1 credit)	None	9

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE LEVEL(S)
Welding I	13032300 (2 credits)	Introduction to Welding	10

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE LEVEL(S)
Welding II	13032400 (2 credits)	Welding I	11

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE LEVEL(S)
Practicum in Manufacturing - Welding	13033000 (2 credits)	Welding II	12

FOR ADDITIONAL INFORMATION ON THE MANUFACTURING CAREER CLUSTER,
PLEASE CONTACT YOUR CAMPUS CTE COUNSELOR
<https://tea.texas.gov/cte>

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