# **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 process engineering. This career cluster includes occupations ranging from Welder and Machinist to Industrial Engineering Technician, and Semi-Conductor Processing Technician.

# Welding





The Welding program of study focuses on occupational and educational opportunities associated with the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. This program of study addresses 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<sup>1</sup>

#### Level 3

Welding II

#### Level 4

• Practicum in Manufacturing – Welding (H)







# **Postsecondary Opportunities**

#### **Associates Degrees**

- Welding Technology
- Building/Construction Site Management
- Operations Management and Supervision

#### **Bachelor's Degrees**

- Welding Technology
- Construction Management
- Project management
- Building/Construction Site Management

#### Master's, Doctoral, and Professional Degrees

- Engineering
- Manufacturing Engineering
- Construction Engineering

## Work-Based Learning and Expanded Learning Opportunities

# Exploration Activities Work-Based Learning

- Participate and compete in SkillsUSA
- Join the American Welding Society
- Work in a local business or industry

apprenticeship

**Activities** 

Job shadow a welder

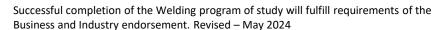
#### **Industry-Based Certifications**

- AWS Certified Welder <sup>1</sup>
- AWS D1.1 Structural Steel <sup>1</sup>
- AWS D9.1 Sheet Metal Welding <sup>1</sup>
- AWS SENSE Level 1: Entry Welder <sup>1</sup>



## **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$52,500	6,800	23%
First-Line Supervisors of Production and Operating Workers	\$70,400	6,000	17%





# 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 (H)	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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Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.