



Level 1

Welding I

Level 2

Welding II

Level 3

Practicum in
Manufacturing

Level 4

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
AWS Certified Welder, D1.1, D9.1	Certified Welder or Welder Inspector	Certified Welder or Welder Inspector	Welding Engineering Technology/ Technician	Welding Engineering Technology/ Technician
ASW SENSE Level 1	Machining Level 1 - CNC Milling: Programming Setup & Operations	Machine Shop Technology/ Assistant	Biomedical Technology/ Technician	Occupational Health and Industrial Hygiene
	Certified Welding Engineering	Operations Management and Supervision	Operations Management and Supervision	Operations Management and Supervision
	Certified Environmental, Safety, and Health Trainer	Occupational Safety and Health Technology/ Technician	Environmental Health	Environmental Health

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$41,350	6,171	9%
Welding Soldering and Brazing Machine Setters, Operators and Tenders	\$40,040	280	9%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
SkillsUSA Industry Tours Guest Speakers	Participate in internships

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

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.



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.

Successful completion of the Manufacturing Technology program of study will fulfill requirements of the Business and Industry Endorsement.
Revised - July 2020

COURSE INFORMATION: WELDING

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	Grade
Welding I	13032300 (2 credits)	None	10-12
Welding II	13032400 (2 credits)	PREQ: Welding I	11-12
Practicum in Manufacturing	13033000 (2 credits)	PREQ: Completion of two CTE courses within this program of study	12

FOR ADDITIONAL INFORMATION ON THE WELDING PROGRAM OF STUDY,
PLEASE CONTACT YOUR LOCAL COUNSELOR OR VISIT
[HTTPS://AMTECH.AMAISD.ORG](https://amtech.amaisd.org)



WELDING PROGRAM OF STUDY

Welding I

Grade Placement: 10–12, Credits: 2

Prerequisites: None.

Welding I provide the knowledge, skills, and technologies required for employment in metal technology systems. Students will develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Course #0701

PDHS

Welding II

Grade Placement: 11–12, Credits: 2

Prerequisites: Welding I.

Welding II builds on the knowledge and skills developed in Welding I. Students will develop advanced welding concepts and skills as related to personal and career development. Students will integrate academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Course #0702

PDHS

Practicum in Manufacturing (future offering)

Grade Placement: 12, Credits: 2

Prerequisite: Completion of two CTE courses within this program of study.

The Practicum in Manufacturing course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. The Extended Practicum in Manufacturing course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

Course #0708

AMTECH

Welding I, II and Practicum in Manufacturing will move to AmTech in 2022.