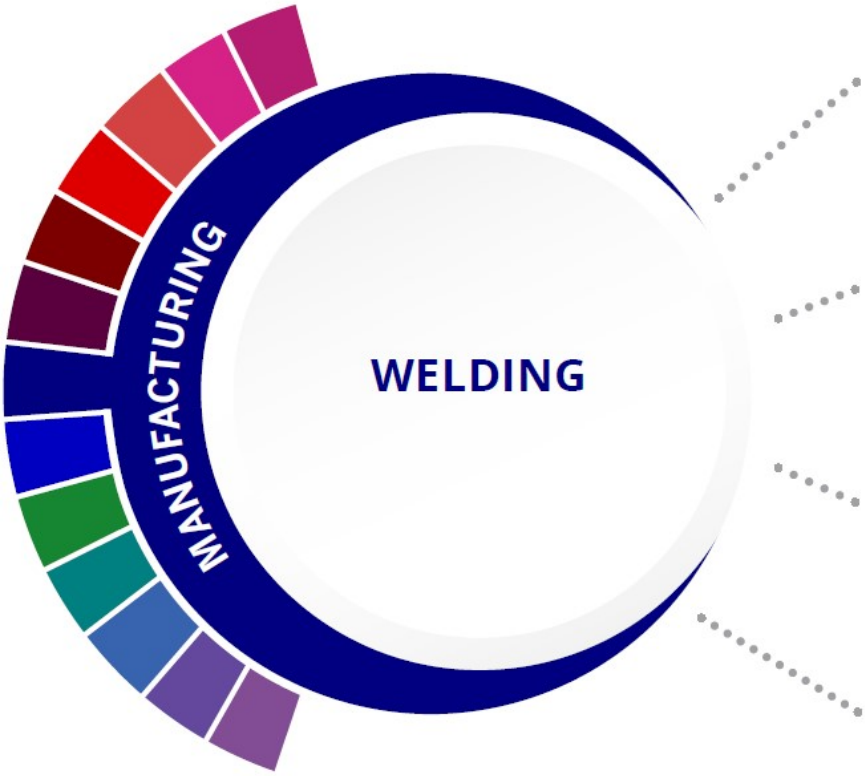

Level 1

Principles of Manufacturing
Introduction to Welding

Welding I

Level 2

Welding II/Lab

Level 3

Career Preparation I

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
NCCER Core	Machining Level 1 - CNC Milling: Programming Setup & Operations	Machine Shop Technology/ Assistant	Biomedical Technology/ Technician	Occupational Health and Industrial Hygiene
API 1104 Welding Certificate	Certified Welding Engineering	Operations Management and Supervision	Operations Management and Supervision	Operations Management and Supervision
NCCER Welding, Level 1	Certified Environmental, Safety, and Health Trainer	Occupational Safety and Health Technology/ Technician	Environmental Health	Environmental Health

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.

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:
Participate and compete in SkillsUSA Job shadow a machinist	Apprenticeship at a local business or industry American Welding Society

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

Texas Education Agency

COURSE INFORMATION

COURSE NAME	SERVICE & COURSE ID	PREREQUISITS (PREQ) COREQUISITES (CREQ)	Grade
Principles of Manufacturing	13032200 / 8320 (1 credit)	None	9-12
Introduction to Welding	13032250 / 8329 (1 credit)	Principles of Manufacturing	9-12
Welding I	13032300 / 8330 (2 credit)	Principles of Manufacturing or Agricultural Mechanics	10-12
Welding II/Lab	13032410 / 8340 (3 credits)	Welding I	11-12
Career Preparation I	12701300 / 8000 (2 credits)	None	11-12

BISD Recommended Course Sequence

Grade	9th Year	10th Year	11th Year	12th Year
Courses	Principles of Manufacturing	Introduction to Welding	Welding I	Welding II or Practicum in Manufacturing or Career Prep