



Level 1
 Blueprint Reading for Manufacturing Applications
 Principles of Manufacturing
 Principles of Applied Engineering

Level 2
 Metal Fabrication and Machining I
 Diversified Manufacturing I
 Occupational Safety and Environmental Technology I

Level 3
 Precision Metal Manufacturing I
 Metal Fabrication and Machining II
 Diversified Manufacturing II
 Occupational Safety and Environmental Technology II
 Computer Integrated Manufacturing (PLTW)

Level 4
 Precision in Metal Manufacturing II/Lab
 Occupational Safety and Environmental Technology III
 Practicum in Manufacturing
 Practicum in Entrepreneurship (TBD)

HIGH SCHOOL/INDUSTRY CERTIFICATION	CERTIFICATE/LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
MSSC Certified Production Technician	Certified Welder or Welder Inspector	Welding Technology/Welder	Welding Engineering Technology/Technician	Welding Engineering Technology/Technician
ISCET Associate-Level Certified Electronics Technician	Machining Level 1 - CNC Milling: Programming Setup & Operations	Machine Shop Technology/Assistant	Biomedical Technology/Technician	Occupational Health and Industrial Hygiene
Mastercam Professional Level Certification	Certified Welding Engineering	Operations Management and Supervision	Operations Management and Supervision	Operations Management and Supervision
NIMS Industrial Technology Maintenance - Basic Mechanical System	Certified Environmental, Safety, and Health Trainer	Occupational Safety and Health Technology/Technician	Environmental Health	Environmental Health

Occupations	Median Wage	Annual Openings	% Growth
Mechanical Engineering Technicians	\$57,117	453	9%
CNC Machine Operators	\$39,250	1,319	12%
Aerospace Engineering and Operations Technicians	\$60,757	114	9%
Electrical and Electronics Engineering Technicians	\$60,382	1,439	9%
Industrial Engineering Technicians	\$61,672	326	9%

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.

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 Manufacturing Technology 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 set up and operate a variety of machine tools to produce precision parts and instruments. Students will also 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 and STEM Endorsement if math and science requirements are met. Revised - July 2020



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El Distrito Escolar Independiente de El Paso no discrimina en los programas de educación o en prácticas de empleo usando el criterio de raza, color, edad, sexo, religión, origen nacional, estado civil, ciudadanía, estado militar, discapacidad, información genética, estereotipo sexual o sexualidad percibida, u otra práctica prohibida por la ley. Preguntas acerca de la aplicación del título VI, VII o IX, y la Sección 504 pueden ser referidas al oficial del distrito, Patricia Cortez al 230-2033; preguntas sobre 504 tocante a estudiantes pueden ser referidas a Kelly Ball al 230-2856.