

COURSES

GRADE 9
Principles of Manufacturing (.5 cr Spring)
Principles of Applied Engineering (.5 cr Spring)
Level 1

GRADE 10
Engineering Design and Presentation I (.5 cr Fall)
Occupational Safety and Environmental Technology I
Manufacturing Engineering Technology I
Level 2

GRADE 11
Principles of Manufacturing (.5 cr Fall)
Principles of Applied Engineering (.5 cr Fall)
Manufacturing Engineering Technology II
Occupational Safety & Environmental Tech II
Level 3

GRADE 12
Practicum in Manufacturing
Career Preparation I
Level 4



POSTSECONDARY OPTIONS - STC - Precision Manufacturing Technology Certificate and/or Precision Manufacturing Technology AAS

HIGH SCHOOL/INDUSTRY CERTIFICATION	CERTIFICATE/LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
FANUC Robot Operator 1	Engineer, Professional	Electro-mechanical Engineering/Technology	Electrical Engineering	
Mastercam Associate Level Certification	PMMI Mechatronics: Programmable Logic Controllers 1	Robotics Technology/Technician	Engineering, General	
NCCER Industrial Maintenance Mechanic	Certified Quality Technician	Instrumentation Technology/Technician	Industrial Engineering	
NIMS Industrial Technology Maintenance - Maintenance Operations	Plant Maintenance Technologist	Industrial Mechanics and Maintenance Technology	Mechanical Engineering	

Additional industry based certification information is available from the TEA CTE website.

For more information on postsecondary options for this program of study, visit TXCTE.org.

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Electro-Mechanical Assemblers	\$30,160	951	9%
Electro-Mechanical Technicians	\$56,555	127	9%
Industrial Machinery Mechanics	\$49,816	3,788	27%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:
Participate in SkillsUSA and local STEM events

Work Based Learning Activities:
Apprenticeship at a local business or industry
American Welding Society

The Advanced Manufacturing and Machinery Mechanics program of study focuses on the assembly, operation, maintenance, and repair of electromechanical equipment or devices. Students may work in a variety of mechanical fields, gaining knowledge and experience in robotics, refinery and pipeline systems, deep ocean exploration, or hazardous waste removal. CTE concentrators may work in a variety of fields of engineering. The Manufacturing Career Cluster® focuses on planning, managing, and performing the processing of materials into intermediate or final products and related



It is the policy of Weslaco ISD not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

Successful completion of the Advanced Manufacturing & Machinery Mechanics program of study will fulfill requirements of the Business & Industry Endorsement. Approved Statewide Program of Study-Sept 2019 Modified by Weslaco ISD Career & Technical Education



COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ)	GRADE
Principles of Manufacturing	13032200 (1 credit)	None	9-12
Occupational Safety and Environmental Technology I	N1303680 (1 credit)	None	9-12
Principles of Applied Engineering	13036200 (1 credit)	None	9-10
Engineering Design and Presentation I	13036500 (1 credit)	PREQ: Algebra I	10-12
Occupational Safety and Environmental Technology II	N1303681 (1 credit)	None	9-12
Manufacturing Engineering Technology I	13032900 (1 credit)	None	10-12
Robotics I	13037000 (1 credit)	None	9-10
Programmable Logic Controller I	TBD	TBD	TBD
Manufacturing Engineering Technology II	13032950 (1 credit)	PREQ: Manufacturing Engineering Technology I	11-12
Robotics II	13037050 (1 credit)	PREQ: Robotics I	10-12
Practicum in Manufacturing	13033000 (2 credits) 13033005 (3 credits) 13033010 (2 credits) 13033015 (3 credits)	None	12
Programmable Logic Controller II	TBD	TBD	TBD
Practicum in Entrepreneurship	TBD	TBD	TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

FOR ADDITIONAL INFORMATION ON THE MANUFACTURING CAREER CLUSTER, PLEASE CONTACT:

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<https://tea.texas.gov/cte>