



<b>Level 1</b>	1788- Principles of Applied Engineering
<b>Level 2</b>	1907- Robotics I
<b>Level 3</b>	1929- Robotics II
<b>Level 4</b>	1933- Practicum in Manufacturing 1752/1753- Career Preparation I/II

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	Electrical Engineering
	Certified Quality Technician	Certified Quality Technician	Industrial Engineering	Industrial Engineering
	Plant Maintenance Technologist	Industrial Mechanics and Maintenance Technology	Mechanical Engineering	Mechanical Engineering

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	
<b>Exploration Activities:</b>	<b>Work Based Learning Activities:</b>
Participate in SkillsUSA and local STEM events	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. CTE learners 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 professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

# COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITS (PREQ) COREQUISITES (CREQ)	Grade
Principles of Applied Engineering	13036200 (1 credit)	None	9-10
Robotics I	13037000 (1 credit)	None	9-10
Robotics II	13037050 (1 credit)	PREQ: Robotics I	10-12
Practicum in Manufacturing	13033000 (2 credits)	None	12
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12