Manufacturing Career Cluster

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.

Robotics & Animation Technology

Statewide Program of Study

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.

Secondary Courses for High School Credit

Level 1

- Principles of Engineering - DC 6 hours

Level 2

- Engineering Design and Presentation I - DC 6 hours

Level 3

- Robotics I

Level 4

- Robotics II
- Practicum in Entrepreneurship #

Aligned Occupations

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	Work-Based Learning Activities
• Participate in UIL BEST Robotic Events	• Project based activities incorporated into advanced curriculum

Industry-Based Certifications

- C-101 Certified Industry 4.0 Associate - Basic Operations
- C-103 Certified Industry 4.0 Associate - Robot System Operations

Postsecondary Opportunities

Associates Degrees

- Electromechanical Engineering/Technology
- Certified Quality Technician
- Industrial Mechanics and Maintenance Technology

Bachelor's Degrees

- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

Master's, Doctoral, and Professional Degrees

- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Engineering	13036200 (1 credit)	None	None
Engineering Design and Presentation I	13036500 (1 credit)	Algebra I	None
Robotics I	13037000 (1 credit)	None	None
Robotics II	13037050 (1 credit)	None	None

FOR ADDITIONAL INFORMATION ON THE ARTS, AUDIO/VIDEO, TECHNOLOGY, AND COMMUNICATIONS CAREER CLUSTER,PLEASE CONTACT: CTE@tea.texas.gov or LISD CTE Director, Teri Hodges, HodgesTC@lisdeagles.net https://tea.texas.gov/cte . Lindale does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Jamie Holder, Title IX Coordinator, 903-881-4000.] Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.