



# Mechatronics

Certificate (30 SCH\*)

\*Semester Credit Hour

5/2024

## First Semester - 9 SCH

CETT 1409 - DC-AC Circuits  
ELMT 2333 - Industrial Electronics  
ELPT 1221 - Introduction to Electrical Safety  
and Tools

## Second Semester - 12 SCH

ENTC 1349 - Reliability and Maintainability  
RBTC 1351 - Robotic Mechanisms  
RBTC 1301 - Programmable Logic Controllers  
HYDR 1345 - Hydraulics and Pneumatics

## Third Semester - 12 SCH

ELMT 2337 - Electronic Troubleshooting  
ELPT 2319 - Programmable Logic Controllers I  
ELPT 1351 - Electrical Machines

## Marketable Skills

Math Skills; manage time and materials; acquire and evaluate information; interpret and communicate information; oral and written communications skills; computer skills; teamwork; cultural diversity; apply technology to work; creative thinking; decision making; problem solving; self-management; OSHA-General Industries; digital electronics; solid state devices; solid state circuits; microprocessors; linear integrated circuits; DC-AC circuits; fluid power; mechatronics tools and instruments; electronics devices, circuits, and systems used in automated manufacturing or process control; Electronic system maintenance, troubleshooting and repair; programmable logic controllers; mechanical, hydraulic, and pneumatic troubleshooting; installation, maintenance and repair of automatic control systems; installation, maintenance and repair of robotic mechanisms; installation, maintenance and repair of four bar linkages, cams, gears and gear trains.

## High School Endorsements

Business and Industry

## Expected Salary

**Texas wage data:** workers on average earn \$117,650; 10% of workers earn \$64,300 or less; 10% of workers earn \$178,120 or more.

## Career Opportunities

Electronics Technician; Electromechanical Technician; Maintenance Technician-Electrical and Mechanical; Industrial Electrician; Industrial Mechanic; Robotics Technician; Wind Turbine Technician; Field Service Technician; Manufacturing Systems Technician; Automation Technician; Process Technician; Power Plant Technician; Fluid Power Technician; Equipment Technician; Power Tool Repair Technician; Plant Engineering Systems Technician; Engineering Technician.

## Program Outcomes

Maintain equipment in an industrial setting including the use of Programmable Logic Controllers, Variable Frequency Drives, hydraulic and pneumatic systems, communications between systems and mechanical systems.

## Additional Education Opportunities

Associate of Applied Science, Bachelor of Arts in Applied Science