



Mechatronics

Certificate (30 SCH*)

*Semester Credit Hour

7/2023

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