



Program Planning Guide

Electrical Vehicle Servicing Certificate (C60160EV)

Program Length: 2 semesters

Program Sites: Lee Main Campus - Day Program

Career Pathway Options: Associate in Applied Science Degree in Automotive Systems (Electrical Vehicle) Technology; Diploma in Automotive Systems (Electrical Vehicle) Technology; Electrical Vehicle Servicing Certificate

Suggested Course Schedule		Class	Lab	Work	Credits	Notes:
1st Semester (fall)						
EVX110	Intro to Transportation Tech.	1	2	0	2	
TRN 120	Basic Transp. Electricity	4	3	0	5	
EVX 115	Light Electric Vehicle Tech	1	2	0	2	
Total Semester Hours		6	7	0	9	
2nd Semester (Spring)						
EVX 120	Electric Vehicle Technology	2	3	0	3	
EVX 130	Hybrid Vehicle Technology	2	3	0	3	
Total Semester Hours		4	8	0	6	
Total Semester Credit Hours Required for Graduation: 15						



Course Descriptions

EVX 110 Intro to Electrified Transp

This course covers the fundamentals of electrified transportation technologies, emphasizing workplace safety and environmental regulation to alternative fuels. Topics include the safety protocols for high-voltage vehicle systems, gaseous and liquid alternative fuels, and Plugin Hybrid and EV charging infrastructure. Upon completion, students should be able to demonstrate safe work practices, service modern hybrid and electric vehicles.

EVX-115 Light Electric Vehicle Tech

This course introduces the core technologies common to all Electric & Hybrid Vehicles (xEVs), covering basic electric motor, battery, and controller theory, including special test and charging equipment. Topics include DC and AC motor & motor controller technologies with hands-on Light EV BLDV motor & controller technologies, as well as Battery, Battery Management, and Battery Charging technologies. Upon completion, students should be able to understand how xEV motors, motor controllers, battery packs, and battery charging systems work and diagnose common malfunctions in all these xEV core technologies.

EVX 120 Electric Vehicle Technologies

Prerequisite: Take TRN 120

This course covers the essential systems and technologies of electric vehicles (EVs), focusing on safety and maintenance. Topics include a review of electrical principles, high-voltage safety protocols, and the design, testing, and maintenance of crucial EV components such as batteries, motors, inverters, and onboard chargers. Upon completion, students should be able to perform diagnostic evaluations and effectively maintain and troubleshoot battery electric vehicles.

EVX 130 Hybrid Vehicle Technologies

Prerequisite: Take TRN 120

This course covers the critical systems and technologies of hybrid vehicles, focusing on safety and maintenance. Topics include a review of electrical principles and safety protocols for hybrid and battery-electric vehicles (BEVs) and the design, testing, and maintenance of critical components such as batteries, motors, inverters, and transmissions. Upon completion, students should be able to perform diagnostic evaluations and effectively maintain and troubleshoot hybrid vehicles.

TRN 120 Basic Transp Electricity

This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.