

# AUTOMOTIVE ELECTRICAL TECHNICIAN (ADVANCED) - CAREER PATHWAY CERTIFICATE OF COMPLETION (CPC)

## Description

The Automotive Electrical Technician (Advanced) Career Pathway Certificate of Completion prepares students in the electrical technician coursework and establishing skills in voltage drops, electrical troubleshooting, vehicle ignition systems, logic controls, air bag systems, controller area network, and cruise control.

The certificate prepares students for Automotive Service Excellence certification in (A6) Electrical/Electronic Systems, (A8) Engine Performance, and (G1) Maintenance and Light Repair.

## Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus first level electrical / electronic courses.
2. Apply the 3rd Maxwell's Equation and Faraday's Law of Induction on the study of ignition systems.
3. Diagnose and repair ignition systems.
4. Study logic controls and Controller Area Network.
5. Diagnose and repair air bag / safety systems and cruise control.

## ENTRANCE REQUIREMENTS

### Academic Entrance Requirements

Required:

- Students must complete the following five courses before enrolling in other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology

Recommended:

- High school diploma or GED

## ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

### Material Costs

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

### Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee

- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

## Course Requirements

Course	Title	Credits
<b>Core Courses</b>		
AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Automotive Technology	2
<b>Total Credits</b>		<b>20</b>

## Performance Standards

- Academic Requirements:
  - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
  - All courses in the program must be completed with a grade of C or higher.

## Sample Plan

<b>First Year</b>		<b>Credits</b>
<b>Fall</b>		
AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Automotive Technology	2
<b>Credits</b>		<b>11</b>
<b>Winter</b>		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
<b>Credits</b>		<b>7</b>
<b>Spring</b>		
AUT 104	Automotive Electric III	2
<b>Credits</b>		<b>2</b>
<b>Total Credits</b>		<b>20</b>