

# AUTOMOTIVE CONTROLLER SYSTEMS TECHNICIAN LEVEL 1 - CAREER PATHWAY CERTIFICATE OF COMPLETION (CPCC)

## Description

The Automotive Controller Systems Technician Level I Career Pathway Certificate of Completion trains students to be the key troubleshooter of a vehicle's drivability problems. Students learn to identify everything from power train malfunctions to ignition failures using state-of-the-art computer diagnostic equipment. Students will be well prepared to work with multiple vehicle platforms to reprogram vehicle computer systems for safety and vehicle function. Students will become competent working with logic circuits and controller area network.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

## Program Learning Outcomes

Upon successful completion of the certificate, 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 second level electrical / electronic courses.
2. Perform various scan tool operations to update vehicle modifications.
3. Describe the use of Controller Area Network on operational vehicles.
4. Describe the need for system features as applied to vehicle safety.
5. Perform Vehicle Data List, Parameter Identification (PIDS) and Service Identification (SIDS) extraction.
6. Describe vehicle reprogramming for performance and emissions.
7. Perform vehicle reprogramming for software issues updates.

## ENTRANCE REQUIREMENTS

### Academic Entrance Requirements

Required:

- Students must complete the following six 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, AUT 206 Engine Performance II, AUT 115 College Success for Automotive Technology

Recommended:

- High school diploma or GED

## ADDITIONAL 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	4
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Automotive Technology	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Automotive Controller Systems I	4
<b>Total Credits</b>		<b>34</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>Fall</b>		<b>Credits</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	4
AUT 103	Automotive Electric II	2
AUT 205	Engine Performance I	2
<b>Credits</b>		<b>8</b>

**Spring**

AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
<b>Credits</b>		<b>9</b>

**Second Year****Fall**

AUT 270	Automotive Controller Systems I	4
AUT 105	Diesel Performance I	2
<b>Credits</b>		<b>6</b>
<b>Total Credits</b>		<b>34</b>