

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

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 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 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 Costs (Beyond Standards 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 |
|----------------------|---|-----------|
| Core Courses | | |
| 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 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 |
| Total Credits | | 19 |

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

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|----------------------|---|----------------|
| First Year | | |
| Fall | | Credits |
| 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 |
| Credits | | 11 |
| Winter | | |
| AUT 102 | Automotive Electric I | 4 |
| AUT 103 | Automotive Electric II | 2 |
| Credits | | 6 |
| Spring | | |
| AUT 104 | Automotive Electric III | 2 |
| Credits | | 2 |
| Total Credits | | 19 |