

# AUTOMOTIVE BASIC SKILLS WITH WELDING - CAREER PATHWAY CERTIFICATE OF COMPLETION (CPCC)

## Description

The Automotive Basic Skills with Welding Career Pathway Certificate of Completion is designed to provide a range of skills required for the automotive industry, including basic internal combustion engines and theory, basic direct current electrical and schematic understanding, and vehicle inspection. The largest portion addresses shop and vehicle safety.

The certificate prepares students for the Automotive Service Excellence certification in (G1) Maintenance and Light Repair.

### Program Learning Outcomes

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

1. Demonstrate correct voltage, current, and resistance measurements on series and parallel circuits using a digital multimeter.
2. Describe the fundamental principles of automotive shop safety and tool care.
3. Describe and apply basic mechanical skills to the tasks of basic vehicle identification, inspection, routine maintenance, handling, and lubrication.
4. Demonstrate the correct name and function of basic hand tools.
5. Demonstrate the use of an automotive diagnostic scan tool and record various data from the scan tool.
6. Demonstrate and apply safety protocols while working in the shop, around small gas engines, and handling hazardous materials.
7. Gain exposure and experience with the operation of welding as it applies to automotive applications.

## 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
- Students must complete driving history verifications with COCC Campus Services Department during Automotive Program Orientation AUT 106
- Students must currently possess and maintain a valid Class C driver's license while enrolled in Automotive Programs except (AUT 101, AUT 107, AUT 110, AUT 115, and MFG 103 may be taken without a driver's license or driving history check)

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 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 114	Welding for the Automotive Trade	3
AUT 115	College Success for Automotive Technology	2
<b>Total Credits</b>		<b>14</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

First Year		Credits
Fall		
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>

**Winter**

AUT 114	Welding for the Automotive Trade	3
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	<b>Credits</b>	<b>3</b>
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	<b>Total Credits</b>	<b>14</b>