

# Electrical and Control Technology, Certificate of Proficiency

The Certificate of Proficiency in Electrical and Control Technology prepares technicians and technologists to troubleshoot, wire, repair, adapt, install, and maintain electrical and industrial motor control equipment found in many local industries. Knowledge and experience are gained through theory and engaging "hands on" labs that prepare graduates to work safely around industrial and commercial electrical equipment. Electrical DC and AC theory, transformers, circuits, wiring, motors, motor controls, relay logic, logic gates, and the National Electrical Code for commercial and industrial systems is emphasized. Skills are developed in troubleshooting, testing, and analyzing electrical circuits. This is the first employable step in the exciting career path of working with electrically automated equipment.

## Program Requirements

Code	Title	Credit Hours
<b>Total Credit Hours</b>		<b>23</b>
<b>Discipline Core Requirements</b>		<b>23 Credits</b>
AET 1050	Electrical Math I	3
AET 1060	Electrical Math II	3
AET 1130	Introduction to Automation	1
AET 1135	Introduction to Automation Lab	1
AET 1140	Applied AC Theory	1
AET 1145	Applied AC Lab	2
AET 1150	Industrial Logic	1
AET 1155	Industrial Logic Lab	1
AET 1250	Industrial Electrical Code	2
AET 1280	Electric Motor Control	4
AET 1285	Electric Motor Control Lab	4

## Graduation Requirements

1. Completion of a minimum of 23 semester credits
2. Overall grade point average of 2.0 (C) or above, with no core course below a 'C-'.
3. All courses must be completed at UVU.

## Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (<http://www.uvu.edu/wolverinetrack/>).

First Year		Credit Hours
<b>Semester 1</b>		
AET 1050	Electrical Math I	3
AET 1130	Introduction to Automation	1
AET 1135	Introduction to Automation Lab (first block course)	1
AET 1150	Industrial Logic (first block course)	1
AET 1155	Industrial Logic Lab (first block course)	1
AET 1140	Applied AC Theory (second block course)	1
AET 1145	Applied AC Lab (second block course)	2
<b>Credit Hours</b>		<b>10</b>
<b>Semester 2</b>		
AET 1060	Electrical Math II	3
AET 1250	Industrial Electrical Code (first block course)	2
AET 1280	Electric Motor Control	4
AET 1285	Electric Motor Control Lab	4
<b>Credit Hours</b>		<b>13</b>
<b>Total Credit Hours</b>		<b>23</b>

## **Program Learning Outcomes**

1. Apply electrical theory to safely wire, troubleshoot, analyze, repair, and build electrical systems and control circuits.
2. Utilize appropriate test equipment and hand tools to troubleshoot, analyze, repair, and install electrical systems and control circuits.
3. Describe the operation of electrical components, motors, generators, transformers, and digital and relay logic in an electrical automation system.