



## **Electrical Apprenticeship C.A.**

Career Community: Electrical and Manufacturing

Curriculum Code: 1570

Effective: Fall 2023 – Summer 2028

### **Description**

This curriculum must be taken while working for an electrical contractor or other licensed employer as a registered apprentice. It is designed to provide electrical apprentices with a background in applied electrical theory and the basic skills necessary to a practicing electrician. This certificate fulfills all related trade instruction required for a United States Department of Labor, Office of Apprenticeship registered apprenticeship program in compliance with State of Michigan requirements for apprentice electricians.

### **Milestone**

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in the course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

### **Additional Information**

Students interested in pursuing an Associate in Applied Science Degree in Electrical Technology should see a program advisor for course substitutions that would more readily transfer to that degree. Students who have previously taken electrical courses should also see an advisor for possible course substitutions.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these classes will fulfill the prerequisite for ELTE 110.

Students who plan to pursue the Electrical Technology, Associate in Applied Science Degree (0134) should substitute ELTE 121 for ELTA 106 and ELTA 120; and ELTE 123 for ELTA 155 and ELTE 150.

### **Contact Information**

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

### Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTA 105	Elect. Industry Orientation	.5 / .5
ELTA 106	Basic Electrical Calculations	2 / 2
ELTA 120	AC Fundamentals - Electrician	2 / 3
ELTA 155	Transformer Fundamentals	2 / 3
ELTA 160	PLC Overview for Electricians	1 / 2
ELTA 180	Introduction to Fire Alarms	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 141	National Electrical Code I	4 / 4
ELTE 145	Electrical Prints for Building	4 / 5
ELTE 150	Electric Motor Maintenance	2 / 3
TECH 102	General Industry Safety	2 / 3

### Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ELTE 112	Basic Wiring Installation	2 / 3
ELTE 132	Control Panel Assembly	2 / 3
ELTE 142	National Electrical Code II	4 / 4
ELTE 232	Machine Controls II	4 / 6

### Minimum Total Credit Hours

30.5 credits / 40.5 billing hours

### Recommended Course Sequence

Semester I (Fall)
ELTE 110 – Milestone course
TECH 102

Semester II (Spring)
ELTA 105
ELTE 141

Semester III (Fall)
ELTA 106
ELTE 150

Semester IV (Spring)
ELTA 120 (First 8 weeks)
ELTA 155 (Second 8 weeks)

Semester V (Fall)
ELTE 145
Semester VI (Spring)
ELTE 131
Semester VII (Fall)
ELTA 160
ELTA 180
Semester VIII (Spring)
Limited Choice

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.*