



Electrical Apprenticeship C.A.

Curriculum Code: 1570

Effective: Fall 2021 – Summer 2026

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.

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.

Students who have already completed DCTM 102, HVAC 102, METS 102 or WELD 102 with a grade of 2.0 or higher may substitute one of these courses for ELTE 102. Any of these classes may also be used to fulfill the prerequisite for ELTE 108 and ELTE 109.

Students may substitute ELTE 129 and ELTE 130 for ELTE 131.

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

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 102	Industrial/Construction Safety	2 / 3

Course Code	Course Title	Credit / Billing Hours
ELTE 108	Practical Electricity I	2 / 3
ELTE 109	Practical Electricity II	2 / 3
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

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

Total Credit Hours

30.5-32.5 credits / 40.5-43.5 billing hours

Recommended Course Sequence

Semester I (Fall)	Semester II (Spring)
ELTE 102	ELTA 105
ELTE 108 (First 8 weeks)	ELTE 141
ELTE 109 (Second 8 weeks)	

Semester III (Fall)	Semester IV (Spring)
ELTA 106	ELTA 120 (First 8 weeks)
ELTE 150	ELTA 155 (Second 8 weeks)

Semester V (Fall)	Semester VI (Spring)
ELTE 145	ELTE 131

Semester VII (Fall)	Semester VIII (Spring)
ELTA 160	Limited Choice
ELTA 180	