

**LANSING COMMUNITY COLLEGE
SAMPLE APPRENTICE CURRICULAR GUIDE**

Name	Trade	Construction Electrician
Company	Total Hours	576
State of MI Apprentice Reg. #	Date Revised	May 30, 2014

This is a suggested curricular guide; companies may request modifications.

Course No.	Course Name	Prerequisite	Credits	Clock Hrs
ELTE 102	Industrial/Construction Safety	#R-3, W-2	2	48
ELTA 105	Electrical Industry Orientation	None	.5	8
	Math class as needed (see below)			
ELTE 110	Practical Electricity	** See notes on pre-requisites below.	3	64
ELTA 120	AC Fundamentals for Electricians	ELTE 110 & (ELTA106 or Math Level 4)	2	48
ELTE 131	Machine Controls I	ELTE 110	4	80
ELTE 141	National Electrical Code I	ELTE 110	4	64
ELTE 145	Electrical Prints for Buildings	ELTE 141	4	80
ELTE 150	Electric Motor Maintenance	ELTE 110	2	48
ELTA 155	Transformer Fundamentals	ELTA120 or ELTE121	1	32
ELTA 160	PLC Overview for Electricians	ELTE 131	1	32
ELTA 180	Intro to Fire Alarms	ELTA160 or ELTE260	1	16
		Subtotals:	24.5	520

MATHEMATICS

The State of Michigan requirements for Electrical Apprentice Related Trade Instruction include 30 hours of mathematics. The classes in the above list require an LCC Math Basic Skills level of 4. Students that do not achieve a level 4 by testing or other means will need to take one of the following classes:

ELTA 106	Basic Electrical Calculations	#M-4 and #R-3 rec.	2	32
MATH 050	Pre-Algebra	#R-3, M-3, W-2	4	64

See Next Page for Electives, Notes and Suggested Course Sequence

ELECTIVES

In order to comply with the US Department of Labor Office of Apprenticeship and State of Michigan Electrical Administrative Board's requirement of a minimum of 576 hours of Related Trade Instruction, apprentices must select courses adding up to a minimum of 56 hours of additional elective course content from the list below.

ELTA 106	Basic Electrical Calculations	#M-4 and #R-3 rec.	2	32
ELTE 112	Basic Wiring Installation	ELTE 110	2	48
ELTE 121	Electrical Mathematics	ELTE 110 & (M-5 OR Equivalent)	5	96
ELTE 122	Industrial Control Electronics	ELTE 121, ELTE 111	5	112
ELTE 123	Motors and Transformers	ELTE 121	5	112
ELTE 132	Control Panel Assembly	ELTE 131, conc.	2	48
ELTE 142	National Electrical Code II	ELTE 141 or Approval	4	64
ELTE 143	National Electrical Code III	ELTE 142 or Approval	4	64
ELTE 232	Machine Controls II	ELTE 131	4	96
ELTE 240	Electrical Estimating	ELTE 145	3	64
ELTE 260	Programmable Controllers I	ELTE 131	4	96
ELTE 261	Programmable Controllers II	ELTE 260	6	128
MATH 050	Pre-Algebra	#R-3, M-3, W-2	4	64

Notes on Prerequisites:

This course has required basic skill level(s) in reading (R), writing (W) and/or math (M). You will need to take the basic skills tests before you can enroll in this course. For more information on the basic skills tests, you may call (517) 267-5500.

** The prerequisites for ELTE 110 include basic skills levels in Reading, Writing and Math and one of several safety classes. It is allowed to take the safety class in the same semester (concurrently) as ELTE 110. The complete list of prerequisites for ELTE 110 is: *Minimum grade of 2.0 in a safety class (ELTE 100 or ELTA 101 or ELTE 102 or HVAC 102 or METS 102 or WELD 102 or concurrently) and basic skill levels as follows: Reading level 3 and Writing level 2 and (Math level 3 or minimum 3.0 in ELTA106).*

SUGGESTED COURSE SEQUENCE

1st Year

ELTE 102 2 cr
 ELTA 105 .5 cr
 Math Class 2 cr
 ELTE 110 3 cr

2nd Year

ELTE 141 4 cr
 ELTA 120 2 cr
 ELTA 155 1 cr

3rd Year

ELTE 131 4 cr
 ELTE 145 4 cr

4th Year

ELTA 160 1 cr
 ELTA 180 1 cr
 ELTE 150 2 cr
 ELECTIVE