

## LANSING COMMUNITY COLLEGE

### CURRICULUM GUIDE

Electrical Utility/Lineworker  
Associate in Applied Science Degree

Curriculum Code: 1783 (Effective Fall 2016 – Summer 2018)

This program of study prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair local, long-distance, and rural electric power cables; erect and construct pole lines; and install underground lines and cables. Includes instruction in line installation and repair, trenching, mobile equipment and crane operation, high-voltage installations, maintenance and inspection, safety, and applicable codes and standards. Department approval is required to enroll in a significant number of the courses required for this degree. Interested students should contact an Electrical Program advisor before beginning this program for information regarding admission requirements.

#### PREREQUISITES

Students should see [Course Descriptions](#) for course prerequisite information. See [Academic Assessment and Placement Testing for Student Success](#) for skills assessment and advising information.

#### INFORMATION

Contact the Electrical Technology Program, West Campus Building, Room M127, telephone number (517) 483-1570 (Website: [www.lcc.edu/utility/electrical/](http://www.lcc.edu/utility/electrical/)) or Student Services West Campus, West Campus Building, Room M106, telephone number (517) 267-5452.

#### REQUIREMENTS

**TOTAL: 39.5 CREDITS**

CODE	TITLE	CREDIT HOURS
ELTA 106	Basic Electrical Calculations (See Note 7)	2
ELTA 120	AC Fundamentals -Electrician (See Note 7)	2
ELTA 155	Transformer Fundamentals (See Note 1)	2
ELTE 102	Industrial/Construction Safety (See Note 2)	2
ELTE 104	Employee Worksite Basics	1
ELTE 108	Practical Electricity I (See Notes 1 and 2)	2
ELTE 109	Practical Electricity II (See Note 1)	2
ELTE 131	Machine Controls I	4
ELTE 173	Energy Industry Fundamentals I	2
ELTE 174	Energy Industry Fundamentals II	2
ELTE 181	Pole Climbing I (See Note 6)	.5
ELTE 182	Pole Climbing II	.5
ELTE 185	Pole Climbing Practice I	.25

ELTE 186	Pole Climbing Practice II	.25
ELTE 270	Lineworker Fundamentals (See Notes 3 and 4)	1
ELTE 272	Electric Basic Line Climbing (See Notes 3 and 5)	4
ELTE 274	Ground/Utility Worker (See Notes 3 and 5)	5
ELTE 276	Energized Secondary Worker (See Notes 3 and 5)	4
METS 140	Rigging (See Note 2)	3

**TOTAL: 20.5 to 21 CREDITS**

**LIMITED CHOICE REQUIREMENTS**

Complete the indicated number of credits from **EACH CHOICE** listed below.

**CHOICE 1: [General Education Core Areas](#)**

**16–22 Credits**

See *General Education Core Requirements* for information on how to fulfill these requirements. Core area proficiency exams, where appropriate, are available for each core area.

Communication Core Area	3–4
Global Perspectives and Diversity Core Area	3–4
Mathematics Core Area (See Note 7)	3–5
Science Core Area	4–5
Writing Core Area	3–4

**CHOICE 2: Pole Climbing, Fitness and Code (See Note 8)**

**4.5–5 Credits**

ELTE 187	Pole Climbing Practice III	.25
ELTE 188	Pole Climbing Practice IV	.25
PFFT 180	Lineworker Fitness A	1
PFFT 180	Lineworker Fitness B	1
PFFT 180	Lineworker Fitness C	2
ELTE 112	Basic Wiring Installation	2
ELTE 141	National Electrical Code I	4

**MINIMUM TOTAL 60**

**NOTES:**

1. The following substitutions will also fulfill the requirements for the indicated courses on the Electrical Utility/Lineworker curriculum: if ELTE 110 has already been taken, it can be used in place of ELTE 108 and ELTE 109; and ELTE 123 in place of ELTA 155.
2. 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 courses may also be used to fulfill the prerequisite for ELTE 108 and METS 140.
3. ELTE 270, ELTE 272, ELTE 274 and ELTE 276 are typically offered at the Consumers Energy Training Facility in Marshall, Michigan or at LCC's West Campus. Students will need to make their own transportation arrangements.

4. ELTE 270 is a one-week course that typically meets between Fall and Spring Semesters. Enrollment is restricted to students who have received department approval and have completed ELTE 182 with a 3.0 minimum grade. ELTE 270 is graded on a Pass/Fail basis and students must receive a passing grade in order to continue with the program.
5. ELTE 272, ELTE 274 and ELTE 276 are scheduled in a ten-week block typically offered during Summer Semester. Enrollment is restricted to students who have received department approval and who have completed all other courses on the curriculum with a minimum 2.0 grade except for both sections of PFFT 180 and ELTE 182 which must be passed with a minimum 3.0 grade. Students must receive a 3.5 in ELTE 272, ELTE 274 and ELTE 276 in order to successfully complete the program.
6. Program approval is required for enrollment in ELTE 181. Program approval is dependent upon an accepted application on file, negative results on a drug screen test, and meeting fitness requirements. This course is graded on a Pass/Fail basis and students must receive a passing grade in order to continue with the program.
7. ELTE 121 can be substituted for both ELTA 106 and ELTA 120 and will fulfill the General Education Core requirement for Mathematics.
8. PFFT 180, ELTE 187, and ELTE 188 are strongly recommended in this choice as physical fitness and practice are extremely important to successfully complete the pole climbing portion of this curriculum. See the Electrical/Lineworker advisor for assistance in choosing the best choices in this area.

### SUGGESTED COURSE SEQUENCE

Students should see course descriptions to find out when departments plan to offer courses. Students who for any reason are unable to follow the course sequence suggested below (for example, those who are part-time, have transferred in courses from another school, or have prerequisites to fulfill) should contact an academic advisor for help with adjustments.

I	II	III	IV
Summer	Fall	Spring	Summer
ELTE 181	<b>Full Semester</b>	<b>Full Semester</b>	ELTE 272
Lim.Ch.1	ELTE 102	ELTE 131	ELTE 274
Lim.Ch.2	METS 140	Lim.Ch.2	ELTE 276
	<b>1<sup>st</sup> 8 weeks</b>	<b>1<sup>st</sup> 8 weeks</b>	
	ELTE 104	ELTA 120	
	ELTE 108	ELTE 173	
	<b>2<sup>nd</sup> 8 weeks</b>	<b>2<sup>nd</sup> 8 weeks</b>	
	ELTA 106	ELTA 155	
	ELTE 109	ELTE 174	
	<b>Short Courses</b>	<b>Short Courses</b>	
	ELTE 182	ELTE 186	
	ELTE 185	ELTE 270	
	Lim.Ch.2	Lim.Ch.2	
		Lim.Ch.2	

V

Fall

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Lim.Ch.1

Lim.Ch.1

Lim.Ch.1

Lim.Ch.1