

# LANSING COMMUNITY COLLEGE

## CURRICULUM GUIDE

Energy Industry Fundamentals  
Certificate of Completion

Curriculum Code: 1777 (Effective Fall 2015 – Summer 2020)

This Certificate provides a foundational understanding of the structure of the United States energy industry and the opportunity to study for and earn pre-employment certifications developed for the industry. Competencies addressed include employment skills, industrial safety, mathematics, electrical theory, problem solving, blueprint reading, rigging and troubleshooting.

### 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 Utility & Energy Systems 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

CODE	TITLE	TOTAL: 24 CREDITS CREDIT HOURS
ELTA 106	Basic Electrical Calculations	2
ELTA 120	AC Fundamentals – Electrician (See Note 1)	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	Electric Circuits Study (See Notes 1 and 2)	2
ELTE 109	Applied Electric Circuits (See Note 1)	2
ELTE 131	Machine Controls I	4
ELTE 173	Energy Industry Fundamentals I	2
ELTE 174	Energy Industry Fundamental II	2
METS 140	Rigging (See Note 2)	3
<b>MINIMUM TOTAL</b>		<b>24</b>

**NOTES:**

1. For those interested in pursuing other curricula in the Electrical Technology program, the following substitutions will also fulfill the requirements for the indicated courses on the Electrical/Utility/Lineworker curriculum: ELTE 110 can be taken in place of ELTE 108 and ELTE 109; ELTE 121 can be taken in place of ELTA 120; 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, ELTE 110, and METS 140.
3. Students must complete all courses in the curriculum with a minimum grade of 2.0 to receive this certificate.

**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.

<b>I Fall</b>	<b>II Spring</b>
<b>Full Semester</b>	<b>Full Semester</b>
ELTE 102	ELTE 131
METS 140	<b>1<sup>st</sup> 8 weeks</b>
<b>1<sup>st</sup> 8 weeks</b>	ELTA 120
ELTE 104	ELTE 173
ELTE 108	<b>2<sup>nd</sup> 8 weeks</b>
<b>2<sup>nd</sup> 8 weeks</b>	ELTA 155
ELTA 106	ELTE 174
ELTE 109	