



## Electrical Utility/Lineworker A.A.S.

Curriculum Code: 1783

Effective: Fall 2020 – Summer 2025

### Description

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.

### Additional Information

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 2.5 grade except for both sections of PFFT 182 & PFFT 183 and ELTE 182 which must be passed with a minimum 3.0 grade. Students must receive a 2.5 in ELTE 272, ELTE 274 and ELTE 276 in order to successfully complete the program.

Students may substitute ELTE 121 for ELTA 106 and ELTA 120; and ELTE 123 for ELTA 155. ELTE 121 also fulfills the General Education Applied Mathematics requirement.

### 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.

### General Education Applied Degree, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition – *Select one*  
ENGL 121, Composition I, 4 credits / 4 billing hours  
ENGL 124, Technical Writing, 3 credits / 3 billing hours  
ENGL 127, Business Writing, 3 credits / 3 billing hours
- English Composition (Second Course)/Communications or Applied Communications – *Select one*  
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours  
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours  
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours  
COMM 240, Interpersonal Communication, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*  
GEOG 200, World Regional Geography, 4 credits / 4 billing hours  
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours  
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*  
ELTE 121, Electrical Mathematics, 5 credits / 6 billing hours  
MATH 115, Technical Math II, 4 credits / 4 billing hours  
MATH 117, Math for Business, 4 credits / 4 billing hours  
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*  
BIOL 120, Environmental Science, 4 credits / 6 billing hours  
CHEM 151 and CHEM 161, General Chemistry I Lecture/Lab, 5 credits / 7 billing hours  
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours  
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

### Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTA 106	Basic Electrical Calculations	2 / 2
ELTA 120	AC Fundamentals - Electrician	2 / 3
ELTA 155	Transformer Fundamentals	2 / 3
ELTE 102	Industrial/Construction Safety	2 / 3
ELTE 104	Employee Worksite Basics	1 / 1
ELTE 108	Practical Electricity I	2 / 3
ELTE 109	Practical Electricity II	2 / 3
ELTE 154	Utility Prints and Diagrams	3 / 3
ELTE 173	Energy Industry Fundamentals I	2 / 2
ELTE 174	Energy Industry Fundamentals II	2 / 2
ELTE 181	Pole Climbing I	.5 / 1
ELTE 182	Pole Climbing II	.5 / 1
ELTE 272	Electric Basic Line Climbing	4 / 6
ELTE 274	Ground/Utility Worker	6 / 9
ELTE 276	Energized Secondary Worker	5 / 8
PFFT 183	Lineworker Fitness C	2 / 4

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

Course Code	Course Title	Credit / Billing Hours
ELTE 156	Lineworker/Utility Rigging	3 / 4
METS 140	Rigging	3 / 4.5

**Program of Study Required Courses, Limited Choice, Fitness/Climbing - *Select a minimum of one course, four credits***

Course Code	Course Title	Credit / Billing Hours
ELTE 131	Machine Controls I	4 / 5
ELTE 185	Pole Climbing Practice I	.25 / .5
ELTE 186	Pole Climbing Practice II	.25 / .5
ELTE 187	Pole Climbing Practice III	.25 / .5
ELTE 188	Pole Climbing Practice IV	.25 / .5
ELTE 270	Lineworker Fundamentals	1 / 1.5
PFFT 181	Lineworker Fitness A	1 / 2
PFFT 182	Lineworker Fitness B	1 / 2

**Total Credit Hours**

62-66 credits / 81-90 billing hours

**Recommended Course Sequence**

Semester I (Summer)	Semester II (Fall)
Gen Ed – English Composition ELTE 181 Limited Choice, Fitness/Climbing (if needed)	ELTA 106 ELTE 102 ELTE 104 ELTE 108 (first 8 weeks) ELTE 109 (second 8 weeks) ELTE 173 (first 8 weeks) ELTE 174 (second 8 weeks) ELTE 182 Limited Choice, Rigging Limited Choice, Fitness/Climbing

Semester III (Spring)	Semester IV (Summer)
Gen Ed – Mathematics or Applied Mathematics ELTA 120 (first 8 weeks) ELTA 155 (second 8 weeks) ELTE 154 PFFT 183 Limited Choice, Fitness/Climbing	ELTE 272 ELTE 274 ELTE 276

Semester V (Fall)
Gen Ed – English Composition (Second Course)/Communications or Applied Communications Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab