



Electrical Utility/Lineworker A.A.S.

Curriculum Code: 1783

Effective: Fall 2019 – Summer 2024

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 Math Core.

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 Core Courses, Recommended Choices

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

- Communication – *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, Fund of Public Speaking, 3 credits / 3 billing hours
 - COMM 140, Interpersonal Communication, 3 credits / 3 billing hours

- Global Perspective and Diversity – *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

- Math – *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
- Science – *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
- Writing – *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

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)
Writing Core 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)
Math Core 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)
Communication Core Global Perspectives and Diversity Core Science Core