Electrical Utility/Lineworker A.A.S.

Career Community: Electrical and Manufacturing
Curriculum Code: 1783
Effective: Fall 2023 – Summer 2028

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.

Milestone

In addition to the required General Education courses in Math and English, completion of ELTE 110 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

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 PFFT 182, PFFT 183 and ELTE 182 which must be passed with a minimum 3.0 grade. Students must receive a 3.0 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

For further information, including about career options, course substitutions and waivers, etc., 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 Degrees, Recommended Courses

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

- English Composition or Applied English – *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)/Communication or Applied 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, Fundamentals Public Speaking, 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 104	Employee Worksite Basics	1 / 1
ELTE 110	Practical Electricity	4 / 6
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 185	Pole Climbing Practice I	.25 / .5
ELTE 186	Pole Climbing Practice II	.25 / .5
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
TECH 102	General Industry Safety	2 / 3

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 1.5 credits*

Course Code	Course Title	Credit / Billing Hours
ELTE 131	Machine Controls I	4 / 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 182	Lineworker Fitness B	1 / 2

Minimum Total Credit Hours

60 credits / 79.5 billing hours

Recommended Course Sequence

Semester I (Summer)
Gen Ed – English Composition or Applied English
ELTE 181

Semester II (Fall)
ELTA 106
ELTE 104
ELTE 110 – Milestone course
ELTE 173 (first 8 weeks)
ELTE 174 (second 8 weeks)
ELTE 182
ELTE 185
TECH 102
Limited Choice, Rigging
Limited Choice, Fitness/Climbing

Semester III (Spring)
Gen Ed – Mathematics or Applied Mathematics
ELTA 120 (first 8 weeks)
ELTA 155 (second 8 weeks)
ELTE 154
ELTE 186
PFFT 183
Limited Choice, Fitness/Climbing

Semester IV (Summer)
ELTE 272
ELTE 274
ELTE 276

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

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.