

LANSING COMMUNITY COLLEGE

Computer, Engineering/Manufacturing Industrial Technologies

Curriculum Code: 1783
(Effective Fall 2018 –
Summer 2023)

Electrical Utility/Lineworker A.A.S. Pathway

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.

Note:

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.

For More 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.

Semester I Summer	Course Title	Prerequisites	Credit/Billing Hours
Writing Core Area - <i>Select 1</i>			
ENGL 121	Composition I	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	4 / 4
ENGL 124	Technical Writing	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
ENGL 127	Business Writing	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
Program of Study Requirements			
<i>PFFT 181 is only required if the student fails the LPAT fitness test.</i>			
ELTE 181	Pole Climbing I	Department Approval	.5 / 1
PFFT 181 <i>(Summer only)</i>	Lineworker Fitness A	Program Approval for Acceptance into the Electrical Utility/Lineworker Curriculum and Reading Level 3 and Writing Level 2	1 / 2
Credits			3.5-5.5 / 4-7

Semester II Fall		Course Title	Prerequisites	Credit/Billing Hours
Program of Study Requirements				
Full Semester	ELTE 102	Industrial/Construction Safety	Reading Level 3 and Writing Level 2	2 / 3
1st 8 Weeks	ELTE 104	Employee Worksite Basics	Reading Level 3 and Writing Level 2 and (Math Level 3 or minimum 2.0 in MATH 105 or MATH 106)	1 / 1
1st 8 Weeks	ELTE 108	Practical Electricity I	Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or WELD 102 or concurrently) and Reading Level 3 and Writing Level 2 and (Math Level 3 or minimum 2.0 in MATH 105 or MATH 106)	2 / 3
1st 8 Weeks	ELTE 173	Energy Industry Fundamentals I	Reading Level 4 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	2 / 2
2nd 8 Weeks	ELTA 106	Basic Electrical Calculations	Reading Level 3 and Writing Level 2 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	2 / 2
2nd 8 Weeks	ELTE 109	Practical Electricity II	Minimum 2.0 in ((ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or WELD 102 or concurrently) and (ELTE 108 or concurrently)) and Reading Level 3 and Writing Level 2 and (Math Level 3 or minimum 2.0 in MATH 105 or MATH 106)	2 / 3
2nd 8 Weeks	ELTE 174	Energy Industry Fundamentals II	Minimum 2.0 in (ELTE 173 or concurrently) and Reading Level 4 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	2 / 2
Short Courses	ELTE 182	Pole Climbing II	Minimum 3.5 in ELTE 181	.5 / 1

Rigging Elective (Full Semester) - <i>Select 1</i>			
ELTE 156	Lineworker/Utility Rigging	Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or WELD 102 or concurrently) and Reading Level 3 and Writing Level 2 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 4
METS 140	Rigging	Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or WELD 102 or concurrently) and Reading Level 3 and Writing Level 2 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 4.5
Fitness/Climbing Electives – <i>Select at least 1 course for a minimum of 1 credit</i> <i>Courses may not be duplicated</i>			
ELTE 185 <i>(8 hour class)</i>	Pole Climbing Practice I	Minimum 3.5 in ELTE 181	.25 / .5
ELTE 186 <i>(8 hour class)</i>	Pole Climbing Practice II	Minimum 2.5 in ELTE 182 or passing grade in ELTE 185	.25 / .5
ELTE 187 <i>(8 hour class)</i>	Pole Climbing Practice III	Minimum 2.5 in ELTE 182 or passing grade in ELTE 185	.25 / .5
ELTE 188 <i>(8 hour class)</i>	Pole Climbing Practice IV	Minimum 2.5 in ELTE 182 or passing grade in ELTE 185	.25 / .5
PFFT 182 <i>(Full Semester Class)</i>	Lineworker Fitness B	Minimum 3.0 in PFFT 181 or 2 minutes or better on LPAT score and Reading Level 3 and Writing Level 2	1 / 2
Credits			17.5 / 23-23.5

Semester III Spring		Course Title	Prerequisites	Credit/Billing Hours
Mathematics Core Area - <i>Select 1</i>				
ELTE 121		Electrical Mathematics	Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or WELD 102) and (ELTE 108 or ELTE 110) and (minimum 2.0 in MATH 114 or Math Level 5) and Reading Level 5	5 / 6
MATH 115		Technical Math II	(Minimum 2.0 in MATH 114 within 2 years or Math Level 5 within 2 years) and Reading Level 5	4 / 4
MATH 117		Math for Business	(Minimum 2.0 in MATH 105 or MATH 106 or MATH 107 within 2 years or Math Level 5 within 2 years) and Reading Level 5 and Writing Level 4	4 / 4
MATH 119		Math – Applications for Living	(Minimum 2.0 in MATH 105 or MATH 106 or MATH 107 or Math Level 5) and Reading Level 5 and Writing Level 4	4 / 4
Program of Study Requirements				
Full Semester	ELTE 154	Utility Prints and Diagrams	Minimum 2.0 in (ELTA 120 or ELTE 121 or concurrently) and Reading Level 3 and Writing Level 2 and (minimum 2.0 in ELTA 106 or Math Level 5)	3 / 3
Full Semester	PFFT 183	Lineworker Fitness C	Reading Level 3 and Writing Level 2	2 / 4
1st 8 Weeks	ELTA 120	AC Fundamentals - Electrician	Minimum 2.0 in ((ELTE 108 or ELTE 110 or concurrently) and (minimum 2.5 in (ELTA 106 or MATH 114 or Math Level 5)) and Reading Level 3 and Writing Level 2	2 / 3
2nd 8 Weeks	ELTA 155	Transformer Fundamentals	Minimum 2.0 in (ELTE 121 or (ELTA 120 or concurrently)) and Reading Level 4 and Writing Level 2	2 / 3

Fitness/Climbing Electives – <i>Select at least 1 course for a minimum of 1 credit</i> <i>Courses may not be duplicated</i>			
ELTE 185 <i>(8 hour class)</i>	Pole Climbing Practice I	Minimum 3.5 in ELTE 181	.25 / .5
ELTE 186 <i>(8 hour class)</i>	Pole Climbing Practice II	Minimum 3.5 in ELTE 182 or passing grade in ELTE 185	.25 / .5
ELTE 187 <i>(8 hour class)</i>	Pole Climbing Practice III	Minimum 3.5 in ELTE 182 or passing grade in ELTE 185	.25 / .5
ELTE 188 <i>(8 hour class)</i>	Pole Climbing Practice IV	Minimum 3.5 in ELTE 182 or passing grade in ELTE 185	.25 / .5
ELTE 270 <i>(4 day Class)</i>	Lineworker Fundamentals	Department Approval	1 / 1.5
Credits			14-15 / 18.5-21
Semester IV Summer	Course Title	Prerequisites	Credit/Billing Hours
Program of Study Requirements (courses taken sequentially)			
ELTE 272	Electric Basic Line Climbing	Department Approval	4 / 6
ELTE 274	Ground/Utility Worker	Minimum 3.5 in ELTE 272	6 / 9
ELTE 276	Energized Secondary Worker	Minimum 3.5 in ELTE 274	5 / 8
Credits			15 / 23
Semester V Fall	Course Title	Prerequisites	Credit/Billing Hours
Science Core Area - <i>Select 1</i>			
BIOL 120	Environmental Science	(Reading Level 5 or ENGL 099 concurrently) and Writing Level 6	4 / 6
CHEM 151 and CHEM 161 <i>(Must sign up for lecture and lab)</i>	General Chemistry I	Reading Level 5 and Writing Level 6 and (Math Level 6 or MATH 109 concurrently or MATH 112 concurrently)	5 / 7
METM 190	Metallurgy and Heat Treatment	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
PHYS 120	The Art of Physics	Reading Level 5 and Writing Level 6 and (Math Level 5 or MATH 107 concurrently or MATH 109 concurrently)	4 / 5

Communication Core Area - <i>Select 1</i>			
COMM 110	Oral Comm in the Workplace	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
COMM 120	Dynamics of Communication	Reading Level 5 and Writing Level 6	3 / 3
COMM 130	Fund of Public Speaking	Reading Level 5 and Writing Level 6	3 / 3
COMM 140	Interpersonal Communication	Reading Level 5 and Writing Level 6	3 / 3
Global Perspectives and Diversity Core Area - <i>Select 1</i>			
GEOG 200	World Regional Geography	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 4
MGMT 234	Diversity in the Workplace	Reading Level 5 and Writing Level 6	3 / 3
SOCL 120	Introduction to Sociology	Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently)	4 / 4
Credits			10-12 / 11-14
Total Credits			60-65 / 79.5-88.5