

**LANSING COMMUNITY COLLEGE**

**Computer, Engineering/Manufacturing Industrial Technologies**

**Curriculum Code: 0966  
(Effective Fall 2018 –  
Summer 2023)**

**Electrical Machine Controls C.C. Pathway**

This certificate is designed to provide students with entry level skills in the understanding of basic electrical theory, basic electrical operating characteristics of industrial machinery, and basic operation of programmable logic controllers. This curriculum would be an excellent choice for students wishing to enter an industrial electrical apprenticeship or for students in other industrial trades who wish to have a basic understanding of electrical control of industrial machines. All of the course work may be applied toward the Electrical Technology, Associate in Applied Science Degree.

**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	Course Title	Prerequisites	Credit/Billing Hours
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**Program of Study Requirements**

*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 and ELTE 109.*

*Students may substitute ELTE 131 for ELTE 129 and ELTE 130 but ELTE 131 must be completed prior to taking ELTE 232 or ELTE 260.*

ELTE 102	Industrial/Construction Safety	Reading Level 3 and Writing Level 2	2 / 3
ELTE 108 <i>(1<sup>st</sup> 8 weeks)</i>	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	2 / 3
ELTE 111	Intro to Industrial Automation	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	4 / 6
ELTE 129	Machine Controls I – A	Minimum 2.0 in (ELTE 108 or ELTE 110 or concurrently) and Reading Level 3 and Writing Level 2 and Math Level 3	2 / 2.5

METS 160	Introduction to Robotics	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	3 / 4.5
<b>Credits</b>			<b>13 / 19</b>
<b>Semester II</b>	<b>Course Title</b>	<b>Prerequisites</b>	<b>Credit/Billing Hours</b>
<b>Program of Study Requirements</b>			
ELTE 109 <i>(2<sup>nd</sup> 8 weeks)</i>	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	2 / 3
ELTE 130	Machine Controls I – B	Minimum 2.0 in (ELTE 129 or concurrently) and Reading Level 3 and Writing Level 2 and Math Level 3	2 / 2.5
ELTE 132	Control Panel Assembly	Minimum 2.0 in (ELTE 130 or ELTE 131 or concurrently) and Reading Level 3 and Writing Level 2 and Math Level 3	2 / 3
ELTE 232	Machine Controls II	Minimum 2.0 in (ELTE 131 or (ELTE 129 and (ELTE 130 or concurrently))) and Reading Level 3 and Writing Level 2 and Math Level 3	4 / 6
ELTE 260	Programmable Controllers I	Minimum 2.0 in (ELTE 131 or (ELTE 129 and (ELTE 130 or concurrently))) and Reading Level 3 and Writing Level 2 and Math Level 3	4 / 6
<b>Credits</b>			<b>14 / 20.5</b>
<b>Total Credits</b>			<b>27 / 39.5</b>