

LANSING COMMUNITY COLLEGE

Computer, Engineering/Manufacturing Industrial Technologies

Curriculum Code: 1780  
(Effective Fall 2018 –  
Summer 2023)

**Mechatronics - Multi-Skilled Maintenance Technology  
A.A.S. Pathway**

A Mechatronics—Multi-Skilled Maintenance Technician will have knowledge of electrical, electronic, computer, mechanical, fluid power, robotic and programmable logic controller systems. Mechatronics Technicians install, maintain, troubleshoot, test, and repair technologically diverse equipment in industries such as manufacturing, aerospace, automotive, medical, material processing, consumer products, and defense systems.

**For More Information**

Visit the [Center for Manufacturing Excellence website](#), or in person at West Campus Building, 5708 Cornerstone Drive, Lansing MI 48917, Room M103, telephone number (517) 483-1104 or by email at [manufacturing@lcc.edu](mailto:manufacturing@lcc.edu).

Semester I	Course Title	Prerequisites	Credit/Billing Hours
<b>Math Core Area - <i>Select 1</i></b>			
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
<b>Program of Study Requirements</b>			
<i>Students who have already completed DCTM 102, ELTE 102, HVAC 102 or WELD 102 with a grade of 2.0 or higher may substitute one of these courses for METS 102. Any of these courses may also be used to fulfill the prerequisite for the ELTE and METS courses.</i>			
ELTE 108 (1 <sup>st</sup> 8 weeks)	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 109 (2 <sup>nd</sup> 8 weeks)	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
METD 150	Industrial Blueprint Reading	None	3 / 3
METS 102	Industrial/Construction Safety	Reading Level 3 and Writing Level 2	2 / 3

METS 160	Introduction to Robotics	Minimum 2.0 in (METS 102 or ELTE 102 or DCTM 102 or HVAC 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>16 / 20.5</b>
<b>Semester II</b>	<b>Course Title</b>	<b>Prerequisites</b>	<b>Credit/Billing Hours</b>
<b>Program of Study Requirements</b>			
ELTE 131	Machine Controls I	Minimum 2.0 in (ELTE 108 or ELTE 110) and Reading Level 3 and Writing Level 2 and Math Level 3	4 / 5
METS 110	Mechanical Power Transmissions	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	4 / 6
METS 125	Intro to Hydraulics/ Pneumatics	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 3	4 / 6
METS 145	Automated Systems	Minimum 2.0 in (ELTE 109 and (ELTE 130 or ELTE 131 or concurrently) and (METS 125 or concurrently) and Reading Level 3 and Writing Level 2 and Math Level 3	3 / 4.5
<b>Credits</b>			<b>15 / 21.5</b>
<b>Semester III</b>	<b>Course Title</b>	<b>Prerequisites</b>	<b>Credit/Billing Hours</b>
<b>Writing Core Area - <i>Select 1</i></b>			
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
<b>Science Core Area - <i>Select 1</i></b>			
PHYS 200	Intro to Applied Physics	Reading Level 5 and Writing Level 6 and (Math Level 5 or MATH 109 concurrently)	4 / 5

<b>Program of Study Requirements</b>			
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
METM 108	Machine Tool Operations	Reading Level 3 and Writing Level 4 and Math Level 4	4 / 6
<b>Credits</b>			<b>15 / 20</b>
<b>Semester IV</b>	<b>Course Title</b>	<b>Prerequisites</b>	<b>Credit/Billing Hours</b>
<b>Communication Core Area - <i>Select 1</i></b>			
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
<b>Global Perspectives and Diversity Core Area - <i>Select 1</i></b>			
MGMT 234	Diversity in the Workplace	Reading Level 5 and Writing Level 6	3 / 3
<b>Program of Study Requirements</b>			
METS 250	Gen. Prevent/Predictive Maint	Minimum 2.0 in (METS 102 or ELTE 102 or DCTM 102 or HVAC 102 or WELD 102 or concurrently) and Reading Level 3 and Writing Level 2 and Math Level 3	3 / 4.5
WELD 108	Welding for Non-Majors	Department Approval	4 / 6
<b>Credits</b>			<b>13 / 16.5</b>
<b>Semester V (Summer)</b>	<b>Course Title</b>	<b>Prerequisites</b>	<b>Credit/Billing Hours</b>
METS 260	Advanced Robotics	Minimum 2.0 in (ELTE 260 and METS 160) and Reading Level 3 and Writing Level 2 and Math Level 3	3 / 4.5
<b>Credits</b>			<b>3 / 4.5</b>
<b>Total Credits</b>			<b>62 / 83</b>