



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

Career Community: Electrical and Manufacturing

Curriculum Code: 1780

Effective: Fall 2023– Summer 2028

Description

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.

Milestone

In addition to the required General Education courses in Math and English, completion of ELTE 110, METD 150, and METS 125 with a 2.0 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

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the [Center for Manufacturing Excellence](#) at West Campus Building, 5708 Cornerstone Drive, Lansing MI 48917, Room M103, telephone number 517-483-1104 or by [email](mailto:manufacturing@lcc.edu) (manufacturing@lcc.edu).

General Education - Applied Degrees, Recommended Courses

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

- English Composition or Applied English – *Select one*
ENGL 124, Technical 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
- Humanities and Fine Arts or Social Science or Applied Social Science – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Math II, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 260	Programmable Controllers I	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METM 108	Machine Tool Operations	4 / 6
METS 110	Mechanical Power Transmissions	4 / 6
METS 125	Intro to Hydraulics/ Pneumatics	4 / 6
METS 145	Automated Systems	3 / 4.5
METS 160	Introduction to Robotics	3 / 4.5
METS 250	Gen. Prevent/Predictive Maint	3 / 4.5
METS 260	Advanced Robotics Capstone	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 110	Gas Metal Arc Welding	4 / 6

Minimum Total Credit Hours

64 credits / 86 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
ELTE 110 – Milestone course
METD 150 – Milestone course
METS 160
TECH 102

Semester II
ELTE 131
ELTE 132 (Second 8 weeks)
METM 108
METS 125 – Milestone course
METS 145

Semester III
Gen Ed – English Composition or Applied English
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
ELTE 260
METS 110

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
METS 250
METS 260
WELD 110

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.