



Mechanical Systems A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 0173

Effective: Fall 2025 – Summer 2030

Purpose of the Major

Machine maintenance technicians are involved with the repair, maintenance, and installation of industrial equipment. They repair the machinery of industry, solving mechanical problems. The skills necessary for this type of work are many and varied: critical thinking, problem solving, mechanics, math and physics are but a few. Maintenance technicians also need to know how to diagnose hydraulic problems, perform preventative maintenance procedures, and be able to work well with others. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of METD 150 and METM 108 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 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Either of these courses will fulfill the prerequisite for the ELTE and METS courses.

Students may substitute ELTE 129 and ELTE 130 for ELTE 131.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Major Required Courses - *A minimum grade of 2.0 is required for General Education courses.*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 110 or	Communication in the Workplace	3 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3

Course Code	Course Title	Credit/ Billing Hours
COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ELTE 110	Practical Electricity	4 / 6
ELTE 121 or MATH 115 or MATH 119 or MATH 120 or MATH 126	Electrical Mathematics Technical Mathematics Math – Applications for Living College Algebra Precalculus	5 / 6 4 / 4 4 / 4 4 / 4 5 / 5
ELTE 131	Machine Controls I	4 / 5
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131	Composition I Technical Writing Business Writing Honors Composition I	4 / 4 3 / 3 3 / 3 4 / 4
METD 150	Industrial Blueprint Reading	3 / 3
METM 108	Machine Tool Operations	4 / 6
METS 110	Mechanical Power Transmissions	4 / 6
METS 120	Industrial Pneumatics	4 / 6
METS 130	Industrial Hydraulics	4 / 6
METS 140	Rigging	3 / 4.5
METS 160	Introduction to Robotics	3 / 4.5
METS 210	Lubrication and Bearings	4 / 6
METS 250	Gen. Prevent/Predictive Maint	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Students considering future transfer, choose MATH 119, MATH 120, or MATH 126.

Major Required Courses, Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences - Select one as recommended or select one from [LCC General Education Applied Degrees](#): Humanities and Fine Arts or Social Sciences or Applied Social Sciences. A minimum grade of 2.0 is required for General Education courses.

Course Code	Course Title	Credit / Billing Hours
GEOG 200	World Regional Geography	4 / 4
MGMT 234	Diversity in the Workplace	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Note: Students considering future transfer, choose GEOG 200 or SOCL 120.

Major Required Courses, Limited Choice – Natural Sciences or Applied Sciences and Technology Lab - Select one as recommended or select one from [LCC General Education Applied Degrees](#): Natural Sciences or Applied Sciences and Technology Lab. A minimum grade of 2.0 is required for General Education courses.

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	5 / 7
METM 190	Metallurgy and Heat Treatment	4 / 6
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6

General Education - Applied Degrees, Recommended Courses

- English Composition or Applied English
Major Required Courses will meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Major Required Courses will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Major Required Limited Choice Courses will meet this requirement.
- Mathematics or Applied Mathematics
Major Required Courses will meet this requirement.
- Natural Sciences or Applied Sciences and Technology Lab
Major Required Limited Choice Courses will meet this requirement.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional](#)

[Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

63 credits / 84.5 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ELTE 110
ELTE 121 or MATH 115 or MATH 119 or MATH 120 or MATH 126
METD 150 – Milestone course
METS 120
TECH 102

Semester II
ELTE 131
METS 110
METS 130
METS 160

Semester III
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
METM 108 – Milestone course
METS 210
Limited Choice – Natural Sciences or Applied Sciences and Technology Lab

Semester IV
COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
METS 140
METS 250
WELD 103
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

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 titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.