Description
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
Students who have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher may substitute one of these courses for TECH 102. Any of these courses may also be used to fulfill the prerequisite for the ELTE and METS courses.

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

Contact Information
Contact the Trades Technology Program at the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

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)/Communications or Applied Communications – Select one
  COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – 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
  METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours

## Program of Study Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit / Billing Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTE 108</td>
<td>Practical Electricity I</td>
<td>2 / 3</td>
</tr>
<tr>
<td>ELTE 109</td>
<td>Practical Electricity II</td>
<td>2 / 3</td>
</tr>
<tr>
<td>ELTE 131</td>
<td>Machine Controls I</td>
<td>4 / 5</td>
</tr>
<tr>
<td>METD 150</td>
<td>Industrial Blueprint Reading</td>
<td>3 / 3</td>
</tr>
<tr>
<td>METM 108</td>
<td>Machine Tool Operations</td>
<td>4 / 6</td>
</tr>
<tr>
<td>METS 110</td>
<td>Mechanical Power Transmissions</td>
<td>4 / 6</td>
</tr>
<tr>
<td>METS 120</td>
<td>Industrial Pneumatics</td>
<td>4 / 6</td>
</tr>
<tr>
<td>METS 130</td>
<td>Industrial Hydraulics</td>
<td>4 / 6</td>
</tr>
<tr>
<td>METS 140</td>
<td>Rigging</td>
<td>3 / 4.5</td>
</tr>
<tr>
<td>METS 160</td>
<td>Introduction to Robotics</td>
<td>3 / 4.5</td>
</tr>
<tr>
<td>METS 210</td>
<td>Lubrication and Bearings</td>
<td>4 / 6</td>
</tr>
<tr>
<td>METS 250</td>
<td>Gen. Prevent/Predictive Maint</td>
<td>3 / 4.5</td>
</tr>
<tr>
<td>TECH 102</td>
<td>General Industry Safety</td>
<td>2 / 3</td>
</tr>
<tr>
<td>WELD 103</td>
<td>Combination Welding</td>
<td>4 / 6</td>
</tr>
</tbody>
</table>

## Minimum Total Credit Hours

63 credits / 85.5 billing hours

## Recommended Course Sequence

### Semester I

- Gen Ed – Mathematics or Applied Mathematics
- ELTE 108 (First 8 weeks)
- ELTE 109 (Second 8 weeks)
- METD 150 – Milestone course
- METS 120
- TECH 102

### Semester II

- ELTE 131
- METS 110
- METS 130
- METS 160
### Semester III
- Gen Ed – English Composition or Applied English
- Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
- METM 108 – Milestone course
- METS 210

### Semester IV
- Gen Ed – English Composition (Second Course)/ Communications and Applied Communications
- Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
- METS 140
- METS 250
- WELD 103

*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.*