# Robotics and Automated Technology C.A.

Career Community: Electrical and Manufacturing
Curriculum Code: 1605
Effective: Fall 2025 – Summer 2030

## Purpose of the Major

A student who completes this certificate will be exposed to the elements of automated systems design and installation needed to obtain employment in various settings including those within the manufacturing and industrial sectors. Students will be able to maintain, troubleshoot, test, and repair modern-day equipment having a technologically diverse design.

## Milestone

Completion of ELTE 110 and ELTE 131 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

A student must earn a minimum grade of 2.0 in all courses.

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

## 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

| 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 |
| MATH 115 | Technical Mathematics | 4 / 4 |
| METD 150 | Industrial Blueprint Reading | 3 / 3 |
| METM 108 | Machine Tool Operations | 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 |
| TECH 102 | General Industry Safety | 2 / 3 |

## Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the Institutional Requirements for Certificates of Achievement. 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

33 credits / 45 billing hours

## Recommended Course Sequence

| Semester I |
| --- |
| ELTE 110 – Milestone course |
| MATH 115 |
| METD 150 |
| METS 160 |
| TECH 102 |

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

*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.*