AUTOMATION MAINTENANCE TECHNICIAN, CERTIFICATE OF PROFICIENCY

This program covers the processes and applications required for a person to be able to perform work in an industrial facility that includes automated manufacturing lines and machines. The program includes both general electrical and mechanical training, but also specific automation maintenance industrial programming including programmable logic controllers (industrial computers) and robotics. Included in the course work are theoretical and hands on training related with Programmable Logic Controllers, Industrial Motor Controls, Power Transmission and Fluid Power. The skills needed to perform the job on specific applications will be covered.

Program contact: Learn more

This certificate will be automatically awarded when the certificate requirements are completed. If you do not want to receive the certificate, please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Identify, select, and operate appropriate test equipment and tools, and interpret test results to solve problems in a controlled environment.

2. Use team skills to collaborate and perform in a professional and workman like fashion in a diverse workforce and a dynamic environment to meet organizational goals and objectives.

3. Apply appropriate Math, Science, and computer skills to support installation, troubleshooting, and maintenance of electrical equipment and systems.

4. Utilize effective communication, time management and conflict management skills to propose solutions to technical problems to supervisors and team members.

5. Diagnose and resolve equipment problems by utilizing good technical assessment skills that include planning, reliability, logical thinking, ability to use drawings, schematics and documentation, and a fundamental understanding of electrical maintenance theory and principles.

6. Work with a safety-focuses mindset and follow industry safety standards, local regulations, and company policies and procedures.

7. Apply the fundamentals of electrical skills to install, troubleshoot, and maintain electrical equipment, such as advanced PLCs, commercial wiring, motors, and motor controls in compliance with the National Electric Code.

8. Employ cross-functional skills to differentiate between hydraulics/pneumatics, mechanical, and welding systems, and isolate and resolve breakdown(s).

Full time

First Semester		Credit Hours
ISET-1301	Mechanical/Electrical Print Reading (1st 8 weeks)	3
ISET-1410	Applied Electricity I (1st 8 weeks)	3
ISET-1310	Mechanical Power Transmission	2
ISET-1420	Applied Electricity II (2nd 8 Weeks)	3
ISET-1320	Fundamentals of Fluid Power (2nd 8 Weeks)	2
MET-2250	Robotics Operations Certification	3
	Credit Hours	**16**
Second Semester		
ISET-2200	Industrial Motor Controls	3
ISET-2500	Programmable Logic Controllers Maintenance I (1st 8 weeks)	3
ISET-2240	Applied National Electric Code	3
ISET-1340	Industrial Piping and Tubing	2
ISET-2210	Commercial Wiring	3
ISET-2511	Programmable Logic Controllers Maintenance II (2nd 8 Weeks)	3
	Credit Hours	**17**
	Total Credit Hours	**33**

Part Time pathway

First Semester		Credit Hours
ISET-1301	Mechanical/Electrical Print Reading (1st 8 Weeks)	3
ISET-1410	Applied Electricity I (1st 8 Weeks)	3
ISET-1420	Applied Electricity II (2nd 8 Weeks)	3
ISET-1320	Fundamentals of Fluid Power (2nd 8 Weeks)	2
	Credit Hours	**11**
Second Semester		
ISET-2200	Industrial Motor Controls	3
ISET-2240	Applied National Electric Code	3
ISET-1340	Industrial Piping and Tubing	2
ISET-2210	Commercial Wiring	3
	Credit Hours	**11**
Third Semester		
ISET-1310	Mechanical Power Transmission	2
ISET-2500	Programmable Logic Controllers Maintenance I (1st 8 Weeks)	3

ISET-2511	Programmable Logic Controllers Maintenance II (2nd 8 Weeks)	3
MET-2250	Robotics Operations Certification	3
	Credit Hours	**11**
	Total Credit Hours	**33**

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.