

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 training on advanced platforms like programmable logic controllers, motor controls etc. 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 (<http://www.tri-c.edu/programs/engineering-technology/integrated-systems-engineering-technology/automation-maintenance.html>)

Financial Assistance funds cannot be applied towards this program. Request for eligibility to utilize Financial Assistance funds for this program is currently pending.

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 (<http://catalog.tri-c.edu/pathways/industrial-manufacturing-construction/integrated-systems-engineering-technology>) about how certificate credits apply to the related degree.

Course	Title	Credit Hours
First Semester		
ISET-1100	Welding Blue Print Reading	2
ISET-1300	Mechanical/ Electrical Print Reading ¹	2
ISET-1320	Fundamentals of Fluid Power	2
ISET-1410	Applied Electricity I ²	3
ISET-1420	Applied Electricity II	3
ISET-2200	Industrial Motor Controls	3
	Credit Hours	15
Second Semester		
ISET-2120	Shielded Metal Arc Welding	4
ISET-2210	Commercial Wiring ³	3
ISET-2240	Applied National Electric Code	3

ISET-2500	Programmable Logic Controllers Maintenance I ⁴	3
ISET-2510	Programmable Logic Controllers Maintenance II	2
ISET-2520	Programmable Logic Controllers Maintenance III	2
	Credit Hours	17
	Total Credit Hours	32

- ¹ ISET-1300 and 1320 are scheduled in consecutive five week sessions.
- ² ISET-1410, 1420, and 2200 are scheduled in consecutive five week sessions.
- ³ ISET-2240 and 2210 are scheduled in consecutive five week sessions.
- ⁴ ISET-2500, 2510, and 2520 are scheduled in consecutive five week sessions.

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.

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