

# INDUSTRIAL MAINTENANCE TECHNICIAN, CERTIFICATE OF PROFICIENCY



This program covers the processes and applications required for a person to fulfill the duties of an Industrial Maintenance Technician. The program includes both general electrical and mechanical training, but also specific facility maintenance training on all the aspects that are involved in keeping a facility fully operational. Included in the course work are theoretical and hands on training related with Industrial Electronics, Mechanical and Fluid Power Transmissions, Boiler Technologies and HVAC. 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 here about how certificate credits apply to the related degree.

## Program Admission Requirements

- MATH-0910 Basic Arithmetic and Pre-Algebra with "C" or higher.

## 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 HVAC, motors, motor controls, and basic PLCs in compliance with National Electric Code.
8. Employ cross functional skills to isolate and resolve breakdowns in HVAC, boiler, and electrical power systems.

Full time with some day classes

First Semester		Credit Hours
ISET-1301	Mechanical/Electrical Print Reading (1st 8 weeks DAY CLASS)	3
ISET-1410	Applied Electricity I (1st 8 weeks DAY CLASS)	3
ISET-1310	Mechanical Power Transmission (1st 8 Weeks)	2
ISET-1450	Heating Ventilation Air Conditioning/ Refrigeration I (1st 8 Weeks)	2
ISET-1420	Applied Electricity II (2nd 8 Weeks DAY CLASS)	3
ISET-1320	Fundamentals of Fluid Power (2nd 8 Weeks)	2
ISET-2450	Heating Ventilation Air Conditioning/ Refrigeration II (2nd 8 Weeks)	2
<b>Credit Hours</b>		<b>17</b>

Second Semester		Credit Hours
ISET-2200	Industrial Motor Controls (1st 8 weeks DAY CLASS)	3
ISET-2500	Programmable Logic Controllers Maintenance I (1st 8 weeks DAY CLASS)	3
ISET-2240	Applied National Electric Code (1st 8 Weeks)	3
ISET-1460	Fundamental Boiler Technology (1st 8 Weeks)	3
ISET-1340	Industrial Piping and Tubing (2nd 8 Weeks DAY CLASS)	2
ISET-2210	Commercial Wiring (2nd 8 Weeks)	3
ISET-2460	Applied Boiler Technology (2nd 8 Weeks)	2
<b>Credit Hours</b>		<b>19</b>
<b>Total Credit Hours</b>		<b>36</b>

Part time evenings only

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
<b>Credit Hours</b>		<b>11</b>
<b>Second Semester</b>		
ISET-2200	Industrial Motor Controls (1st 8 Weeks)	3
ISET-2240	Applied National Electric Code (1st 8 Weeks)	3
ISET-1340	Industrial Piping and Tubing (2nd 8 Weeks)	2
ISET-2210	Commercial Wiring (2nd 8 Weeks)	3
<b>Credit Hours</b>		<b>11</b>
<b>Third Semester</b>		
ISET-1450	Heating Ventilation Air Conditioning/ Refrigeration I (1st 8 Weeks)	2
ISET-1460	Fundamental Boiler Technology (1st 8 Weeks)	3
ISET-2450	Heating Ventilation Air Conditioning/ Refrigeration II (2nd 8 Weeks)	2
ISET-2460	Applied Boiler Technology (2nd 8 Weeks)	2
<b>Credit Hours</b>		<b>9</b>
<b>Fourth Semester</b>		
ISET-1310	Mechanical Power Transmission (1st 8 Weeks)	2
ISET-2500	Programmable Logic Controllers Maintenance I (1st 8 Weeks)	3
<b>Credit Hours</b>		<b>5</b>
<b>Total Credit Hours</b>		<b>36</b>

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.