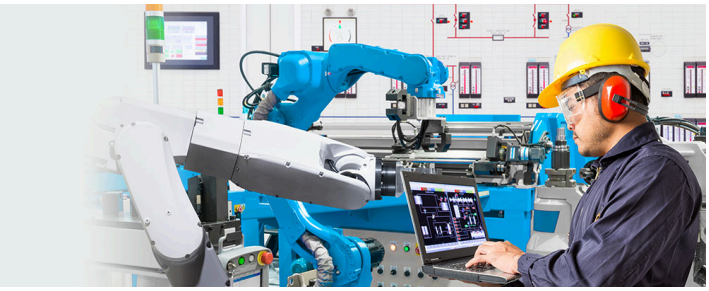
STEELWORKER FOR THE FUTURE – ELECTRICAL TECHNOLOGY, CERTIFICATE OF PROFICIENCY



The Steelworkers for the Future program - developed in partnership with Cleveland Cliffs, the world's leading steel and mining company - targets high-tech, well-paying jobs in electrical and mechanical technology. Students enrolling in the Certificate of Proficiency in Steelworker for the Future - Electrical Technology will take Electrical related courses at Tri-C that combines classroom learning and hands-on learning environments.

Program participants are eligible for paid internships at Cleveland Cliffs.

Upon completion, eligible participants may be hired at Cleveland Cliffs based on hiring needs and requirements at the time of graduation.

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.

Related Degrees and Certificates

- Automation Maintenance Engineering Technology, Associate of Applied Science
- Automation Maintenance Technician, Certificate of Proficiency

- High School Diploma/GED
- MATH-0915 Basic Arithmetic and Pre-Algebra, or qualified Math Placement.

Program Learning Outcomes

1. Identify, select, and operate appropriate test equipment and tools, and interpret test results to solve problems in a controlled environment.
2. Understand the basic principles of electric motors, including how they work and how to select the right motor for a given application.
3. Interoperate and create different types of motor control circuits and the components that make up these circuits, such as contactors, relays, and overload protection devices.
4. Develop practical skills in the assembly, installation, and maintenance of mechanical drives.
5. Apply the fundamentals of electrical skills to install, troubleshoot, and maintain electrical equipment, such as advanced PLCs, motors, and motor controls.
6. Interpret mechanical, and electrical blueprints as needed when installing, maintaining, and repairing industrial equipment.
7. Understand how a reliability maintenance program and predictive maintenance technologies can improve uptime, increase safety, and improve overall equipment effectiveness.

Suggested Semester Sequence

First Semester		Credit Hours
ISET-1301	Mechanical/Electrical Print Reading	3
ISET-1310	Mechanical Power Transmission	2
ISET-1410	Applied Electricity I [1]	3
ISET-1420	Applied Electricity II [2]	3
ISET-2990	Reliability Centered Maintenance	3
Select one of the following		2-3
ISET-1000	Numerical Applications in Electrical and Mechanical Maintenance	
MATH-1190	Algebraic and Quantitative Reasoning (or higher approved Ohio Transfer 36 Mathematics course)	
	Credit Hours	**16-17**
Second Semester		
ISET-2200	Industrial Motor Controls [1]	3
ISET-2240	Applied National Electric Code	3
ISET-2220	Fundamentals of Electronics and Instrumentation [2]	3
ISET-2500	Programmable Logic Controllers Maintenance I [1]	3
ISET-2511	Programmable Logic Controllers Maintenance II [2]	3
	Credit Hours	**15**
	Total Credit Hours	**31-32**

[1] First 8 week course.
[2] Second 8 week course.

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.