

# AUTOMATION MAINTENANCE ENGINEERING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE



The Automation Maintenance Engineering Technology program prepares the student to diagnose, troubleshoot, and repair automated manufacturing lines and equipment. The program includes both 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. Students completing this program will find careers as electrical maintenance technicians, automation maintenance technicians, maintenance technicians, or controls technicians. The associate's degree also prepares students to move into a maintenance supervision role in their career.

**Program Contact:** Learn more.

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

- High School Diploma/GED
- ENG-0995 Applied College Literacies or appropriate score on English Placement Test.
- MATH-0915 Basic Arithmetic and Pre-Algebra or qualified Math Placement.

## Program Learning Outcomes

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

- Identify, select, and operate appropriate test equipment and tools, and interpret test results to solve problems in a controlled environment.
- 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.
- Apply appropriate Math, Science, and computer skills to support installation, troubleshooting, and maintenance of electrical equipment and systems.
- Utilize effective communication, time management and conflict management skills to propose solutions to technical problems to supervisors and team members.

- 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.
- Work with a safety-focused mindset and follow industry safety standards, local regulations, and company policies and procedures.
- 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.
- Employ cross-functional skills to differentiate between hydraulics/pneumatics, mechanical, and welding systems, and isolate and resolve breakdown(s).

First Semester		Credit Hours
ENG-1010	College Composition I	3
ISET-1301	Mechanical/Electrical Print Reading (First 8 Weeks)	3
ISET-1410	Applied Electricity I (First 8 weeks)	3
ISET-1420	Applied Electricity II (Second 8 weeks)	3
ISET-1320	Fundamentals of Fluid Power (Second 8 Weeks)	2
MATH-1190	Algebraic and Quantitative Reasoning (or higher Approved Ohio Transfer 36 Mathematics course) <sup>1</sup>	3
<b>Credit Hours</b>		<b>17</b>

Second Semester		Credit Hours
ISET-2200	Industrial Motor Controls (First 8 weeks)	3
ISET-2240	Applied National Electric Code (First 8 weeks)	3
ISET-2210	Commercial Wiring (Second 8 weeks)	3
ISET-1340	Industrial Piping and Tubing (Second 8 Weeks)	2
IT-1090	Computer Applications	3
<b>Credit Hours</b>		<b>14</b>

Third Semester		Credit Hours
BADM-1050	Professional Success Strategies	3
ISET-1310	Mechanical Power Transmission (First 8 Weeks)	2
ISET-2500	Programmable Logic Controllers Maintenance I (First 8 Weeks)	3
ISET-2511	Programmable Logic Controllers Maintenance II (Second 8 Weeks)	3
MET-2250	Robotics Operations Certification (Second 8 Weeks)	3
<b>Credit Hours</b>		<b>14</b>

Fourth Semester		Credit Hours
COMM-1000	Fundamentals of Interpersonal Communication	3
ENG-2151	Technical Writing	3
ISET-2220	Fundamentals of Electronics and Instrumentation (First 8 Weeks)	3

MET-2260	Infrared Robotic Vision	3
PSY-1050	Introduction to Industrial/Organizational Psychology	3
DEGR-XXXX	Arts and Humanities/Natural Science Elective	3
<b>Credit Hours</b>		<b>18</b>
<b>Total Credit Hours</b>		<b>63</b>

<sup>1</sup> MATH-1240 Contemporary Mathematics taken prior to Fall 2024 will be accepted to meet mathematics requirement for this program.