

# CERTIFICATE OF ACHIEVEMENT IN INDUSTRIAL MAINTENANCE TECHNOLOGY

This certificate prepares students for entry-level employment in the fields of industrial maintenance, industrial machine operation, industrial electrician, corrections facilities maintenance, hospital engineer, and food service machine technicians. Students completing this certificate will acquire employment skills in the area of electricity, motor controls and programmable motor drives, programmable logic controllers, hydraulics/pneumatics, industrial mechanics, machining, refrigeration and boilers, and various welding methods.

## Program Outcomes

- Identify, design, and troubleshoot an industrial electrical circuit with a multi-meter to industrial standards.
- Read a print, repair and maintain the mechanical components of hydraulic and pneumatic circuits found in industrial machines to like new condition.
- Design, program, and troubleshoot both programmable logic controllers (PLC), and variable frequency drives (VFD). This is accomplished in single phase and three phase circuits.
- Weld in three modes: MIG, STICK, and TIG to industrial maintenance standards.
- Have additional entry level job skills in: machining, boilers, refrigeration, mechanics, motor control, and fabrication.
- Possess entry-level job skills necessary to program controllers in the industry.

## Career Opportunities

Upon successful completion of this certificate, students will be prepared for employment in the following fields: industrial maintenance technician, industrial machine operator, industrial electrician, corrections facilities maintenance, hospital engineer, and food service machine technician.

## Program Requirements

Code	Title	Units
REQUIRED CERTIFICATE COURSES		30
ITEC 110	Electricity and Electronics	3
ITEC 111	Manufacturing Processes	3
ITEC 112	Welding Principles 1	4
ITEC 120	Programmable Logic Controllers	3
ITEC 213	Industrial Mechanics	5
ITEC 222	Automated Controls	5
ITEC 223	Welding Principles 2	4
ITEC 224	Hydraulics and Pneumatics	3
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ELECTIVES		0-16
The courses below are suggestions and are completely voluntary. See instructor for supervision before adding.		
WEXP 193M	Maintenance Technology Work Experience – First Semester	1-4
WEXP 194M	Maintenance Tech Work Experience - Second Semester	1-4

WEXP 195M	Work Experience Maintenance Technician - Third Semester	1-4
WEXP 196M	Work Experience Maintenance Technician - Fourth Semester	1-4
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TOTAL		30

The Certificate of Achievement requirements include completion of the certificate courses with a "C" or better grade in each course. Required and support courses may be substituted with the approval of the Industry & Technology Division Chair.