

MAINTENANCE TECHNICIAN APPRENTICESHIP

Program Number: 50-464-1

Apprenticeship

Campus: Fond du Lac

This program is **not** eligible for financial aid

Gain on-the-job training and perfect a wide range of installation, manufacturing and maintenance skills with the Maintenance Technician Apprenticeship at Moraine Park Technical College.

About the Program

Maintenance technicians perform tasks related to installation and repair of manufacturing, process and facility related equipment. Both mechanical and electrical skills are applied to preventative and predictive maintenance, equipment repairs and equipment enhancements.

What You'll Learn

To succeed within an industrial working environment, maintenance technician apprentices will need to learn safety precautions, print reading, National Electrical Code, motor controls, programmable controllers, preventative and predictive practices and fluid power. This apprenticeship combines theory and hands-on instruction to each student enhancing the skills required for a career in the technical trades.

Work Description

Maintenance technicians perform tasks to adjust, modify, repair and improve equipment and processes within an industrial environment. They also read blueprints, install hydraulic and pneumatic equipment and controls. Preventative maintenance, bearing diagnostics, mechanical drives and pump system repairs are additional tasks completed by maintenance technicians.

Maintenance technicians will also perform electrical tasks such as troubleshooting with the use of a multimeter, oscilloscope and other testing equipment. They install conduit, electrical circuits, and electrical controls such as timers, relays, and variable speed drives. Utilizing Programmable Logic Controllers (PLCs) is another technical skill that assists in troubleshooting and improving manufacturing equipment. Maintenance technicians also perform machining, welding and other tasks using hand tools, mills and lathes.

For safety, maintenance technicians must understand the risks and hazards when working on industrial equipment. A practical understanding of OSHA is required in addition to referencing and understanding the National Electrical Code designed to protect persons and property from hazards arising from the use of electricity.

Additional Information

Contact Kim Spartz at (920) 924-3217 or kspartz@morainepark.edu (cbrendemihl@morainepark.edu) to discuss transfer opportunities.

Journeyworkers can earn a degree customized to their interests with the Technical Studies - Journeyworker (<https://catalog.morainepark.edu/programs/technical-studies-journeyworker/>) Associate of Applied Science degree at Moraine Park Technical College.

If you want to learn more about apprenticeships in Wisconsin, visit <https://dwd.wisconsin.gov/apprenticeship/>.

Application Information

Apprentice students do not complete standard admissions with Moraine Park. Interested students should contact:

Tim Budda, Apprenticeship Training Representative

Phone: 262-335-5849

Email: timothy.budda@dwd.wisconsin.gov

Application Requirements

Applicants should be 18 years of age and submit an apprentice/employer application to the Bureau of Apprenticeship Standards. Applicants must have a high school diploma or equivalent and be physically able to perform required work practices safely.

Students are required to complete First Aid/CPR and Transition to Trainer classes.

Approximate Costs

Tuition

Occupational

- \$146.20 per credit (resident)
- \$219.30 per credit (out-of-state resident)

Associate of Arts/Associate of Science

- \$188.90 per credit (resident)
- \$283.35 per credit (out-of-state resident)

Online students are not charged out-of-state fees.

Student Fees

- \$4.50 minimum per course Material Fee
- \$12.50 per-credit Supplemental Fee for Undergraduate courses
- \$10 minimum per credit Online Course Fee (Fee suspended for 2023-2024)
- \$4.50 per term mandatory Student Accident Insurance Fee

Please refer to Tuition & Fee Information (<https://catalog.morainepark.edu/admissions-registration/tuition-fee-information/>) for additional enrollment fee information.

Training Period

The Maintenance Technician Apprenticeship consists of five years at 10,144 hours, of which 876 hours is spent in paid-related classroom instruction. First Aid and CPR are completed during the first 12 months of the contract with the Transition to Trainer course in the final year of the apprenticeship.

Working Conditions

Maintenance technicians require a moderate level of physical strength. They must frequently stand, squat or kneel for long periods and work in cramped or uncomfortable positions. Since much of their work is indoors, maintenance technicians are less exposed to inclement weather than most other trade workers.

Tools and Equipment

Maintenance technicians usually provide their own tools, including screwdrivers, pliers, sockets sets, adjustable wrenches and hammers. Employers generally provide heavier tools such as grinders, air tools, test meters and power tools.

Course Requirements

Course	Title	Credits
Year 1		
Term 1		
413-750	DC Electricity for Industrial Electricians	2
413-751	AC Electricity for Industrial Electricians	2
Credits		4
Term 2		
413-773	Safety and Print Reading	0.5
413-760	Industrial Electrician Transformers	1
413-761	Industrial Electrician Motors and Generators	1
413-752	Codes for Industrial Electricians 1	0.5
413-753	Codes for Industrial Electricians 2	0.5
Credits		3.5
Year 2		
Term 3		
413-762	Industrial Electrician Motor Controls 1	1
413-763	Industrial Electrician Motor Controls 2	1
413-764	Industrial Electrician Motor Controls 3	1
413-756	Codes for Industrial Electricians 5	0.5
Credits		3.5
Term 4		
413-757	Codes for Industrial Electricians 6	0.5
413-765	Power Systems and Variable Speed Drives	2
413-758	Codes for Industrial Electricians 7	0.5
413-759	Codes for Industrial Electricians 8	0.5
Credits		3.5
Year 3		
Term 5		
464-718	Fluid Power Systems	2
413-769	Programmable Logic Controllers 1	1
Credits		3
Term 6		
464-719	Preventative and Predictive Maintenance	1
413-754	Codes for Industrial Electricians 3	0.5
413-755	Codes for Industrial Electricians 4	0.5
Credits		2
Year 4		
Term 7		
464-713	Power Transmission Systems	1.5
464-709	Rigging and Safety	0.5
Credits		2
Term 8		
464-712	Bearings, Measurement and Print Reading	1
464-717	Precision Alignment, Pumps and Pumping Systems	2
Credits		3
Total Credits		24.5

This apprenticeship program requires Related Electives. Please contact your Apprenticeship Coordinator for courses.

Program Outcomes

- Apply AC and DC theory to an industrial setting
- Apply the National Electric Code requirements to industrial equipment and facilities
- Apply operational principles to transformers
- Maintain electric motors and motor controls
- Apply operational and troubleshooting principles to variable speed drives
- Apply operational and troubleshooting principles to programmable logic controllers and automation equipment
- Communicate trade and occupational related information effectively
- Demonstrate proper rigging techniques
- Select an appropriate power transmission system for a given application
- Identify suitable pumps for given applications
- Recommend bearings for given applications
- Apply operational and troubleshooting principles to fluid power systems
- Plan maintenance schedules for a given system

Career Opportunities

- Maintenance Technician
- Project/Design Technician
- Industrial Electrician
- Repair/Service Technician