

MAINTENANCE TECHNICIAN APPRENTICESHIP

Campus Location:

Moraine Park Technical College
235 North National Avenue, Fond Du Lac, WI 54936

Work Location:

Rock Machinery Co., LLC
7675 Pamperin Way, Allenton, WI 53002

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, fluid power, and welding. 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.

APPLICATION INFORMATION

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

Bryant Fazer, Rock Machinery President

Phone: 414-331-6141

Email: bfazer@rockmachinery.com

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 a First Aid/CPR and Transition to Trainer class.

APPROXIMATE COSTS

- \$143.45 per credit (resident)
- \$215.18 per credit (out-of-state resident)
- Online students are not charged out-of-state fees.

Rock Machinery will reimburse students for all costs per completion of each semester.

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.

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

COURSE REQUIREMENTS

Year 1		
Course	Title	Credits
413-750	DC Electricity for Industrial Electricians	2
413-751	AC Electricity for Industrial Electricians	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		7.5
Year 2		
Course	Title	Credits
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
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		7
Year 3		
Course	Title	Credits
413-769	Programmable Logic Controllers 1	1
464-718	Fluid Power Systems	2
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
442-314	Basic Welding 1	1
421-555	Blueprint Reading	1
Credits		7
Year 4		
Course	Title	Credits
464-713	Power Transmission Systems	1.5
464-709	Rigging and Safety	0.5
464-712	Bearings, Measurement and Print Reading	1
439-307	Basic Machining	3
Credits		6
Year 5		
Course	Title	Credits
464-717	Precision Alignment, Pumps and Pumping Systems	2
Credits		2
Total Credits		29.5