INDUSTRIAL ELECTRICIAN APPRENTICESHIP

Program Number: 50-413-1
Apprenticeship
Campus: Fond du Lac
This program is **not** eligible for financial aid

Start your career and your college degree at the same time! Gain on-the-job electrical training with the Industrial Electrician Apprenticeship program at Moraine Park.

About the Program

Industrial electricians work to install, test, troubleshoot, maintain and repair electrical equipment in industrial settings. They ensure electrical systems run safely and efficiently, as the systems they work on power large, complex facilities.

What You'll Learn

Industrial electrician apprentices learn from hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Work Description

As an industrial electrician apprentice, you'll perform work on motors, motor control cabinets, power distribution and lighting within an industrial environment. You'll need to solve complex problems, apply math to daily tasks and perform maintenance on electrical equipment. Working environments and industries vary and may require additional knowledge of local or state codes and regulations.

Industrial electricians perform electrical tasks such as troubleshooting with the use of a multimeter, oscilloscope and other testing equipment. They install conduit, electrical circuits, 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.

For safety, industrial electricians 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.

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 Industrial Electrician Apprenticeship consists of four years at 8,320 hours, of which 720 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

Industrial Electricians 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, Industrial Electricians are less exposed to inclement weather than most other trade workers.

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1-800-472-4554 | TTY/VP. Use Relay/VRS

Tools and Equipment

Industrial Electricians usually provide their own tools, including screwdrivers, side cutters, sockets sets, adjustable wrenches and wire strippers. Employers generally provide heavier tools such hydraulic knock-out punches, 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		
413-766	Fluid Power Systems-Pneumatics	0.5
413-767	Fluid Power Systems-Hydraulics	0.5
413-769	Programmable Logic Controllers 1	1
	Credits	**2**
Term 6		
413-770	Programmable Logic Controllers 2	1
413-771	Programmable Logic Controllers 3	1
413-754	Codes for Industrial Electricians 3	0.5
413-755	Codes for Industrial Electricians 4	0.5
	Credits	**3**
Year 4		
Term 7		
413-768	Solid State Electronics	2
	Credits	**2**
Term 8		
413-772	Green Awareness for the E&I Trades	1
	Credits	**1**
	Total Credits	**22.5**

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 and troubleshooting principles to a transformer installation
- Maintain electric motors and motor controls
- Test solid state electronic system components
- Apply operational and troubleshooting principles to power systems and variable speed drives
- Apply operational and troubleshooting principles to programmable logic controllers and automation equipment
- Apply operational and troubleshooting principles to fluid power systems
- Interpret industrial equipment drawings and electrical prints
- Communicate trade and occupational related information effectively

Career Opportunities

- Maintenance Technician
- Facilities Technician
- Industrial Electrician
- Repair/Service Technician