

Academy for Manufacturing Careers

Industrial Maintenance Mechanic Apprenticeship



Apprentices will learn the necessary skills and earn a journeyman's certification for a Industrial Maintenance Mechanic, using the latest tools in this four year, Department of Labor registered technical instruction program.

A variety of classroom instruction formats including lecture, PowerPoint, group discussion, and group exercises gives the student maximum hands-on learning opportunities.



Core Classes

Industrial Blue Print Reading
Algebra
Machining Theory & Methods
Basic Gauges & Measurement
Materials/Metallurgy
Basic Industrial Electricity
Problem Solving/Lean

Industry standards, automotive OEM requirements, best practices, and requests for this training by our local manufacturers all continue to show the need for this training.

Gives the Apprentice the foundation to build upon for future specialized instruction.

Track Specific

Geometry
Precision Machining Methods
Industrial Hydraulics/Pneumatics
Welding I
Welding II
Machine Maintenance & Troubleshooting
Basic PLC
Industrial Wiring
Drive Components & Bearings
Electrical Troubleshooting

NOTICE OF NONDISCRIMINATORY POLICY AS TO STUDENTS

The Academy for Manufacturing Careers admits students of any race, color, national and ethnic origin, ancestry, religious creed, age, disability, marital status, sexual orientation, gender, or gender expression to all the rights, privileges, programs and activities generally accorded or made available to students at the school. It does not discriminate on the basis of race, color, national and ethnic origin, ancestry, religious creed, age, disability, marital status, sexual orientation, gender, or gender expression in administration of its educational policies, admissions policies, scholarship and loan programs, and any other school-administered programs.



Jackson Area
Manufacturers Association
Helping Manufacturers Succeed & Grow Since 1937

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Geometry

Prerequisite: Algebra

This class provides the student with the ability to analyze problems relating to engineering drawings. Geometry deals with measurements, relationships of points, lines and angles. Proficiency in geometry will aid in determining areas and volumes of circles, triangles and other common polygons.

Precision Machining Methods

Prerequisite: Machining Theory & Methods

A basic course in machining theory and an introduction to the use of common tools and techniques in manufacturing. Topics introduced include: turning, boring, drilling, milling, grinding, use of hand tools, machine setup, preventative maintenance, efficient operation of tools, and use of the Machinery Handbook.

Welding I

This course covers basic theory and fundamental application of welding as required in the metal fabrication industry. The class includes: development of basic skills in preparation, welding and cutting of metal and provides hands-on experience within shielded metal arc welding and oxy-acetylene welding.

Industrial Hydraulics/Pneumatics

This course provides instruction in the basics of hydraulic and pneumatic systems including pumps, valving, control assemblies, and actuators. A general understanding of basic laws and formulas used in simple hydraulic circuits, including standard hydraulic syls, and maintenance procedures will be provided.

Welding II

This course provides GMAW (gas metal arc welding formally known as MIG welding) and GTAW (gas tungsten arc welding formally known as TIG welding) processes and techniques. Topics will include: safety, use of equipment, power sources, shielding gases, filler metals, welding techniques, troubleshooting and more.

Machine Maintenance & Troubleshooting

This course covers methods and means used to troubleshoot and maintain machines typically found in a manufacturing environment. Problem symptoms, problem identification, maintenance records and systems will be covered.

Drive Components & Bearings

This course instructs students in the principles, applications, and maintenance of various types of bearings and mechanical couplings, including ball and roller, powdered metal, non-metallic, hydrostatic bearings; couplings: such as shear, torque limiting, floating and insulated, speed reducers, seals and gears.

Industrial Wiring

Prerequisite: Basic Industrial Electricity

Practical applications of Industrial Electrical Wiring is covered starting with codes, standards, and electrical prints and then move onto the safe use of hand tools and power tools used in the industry.

Electrical Troubleshooting

Prerequisite: Industrial Wiring

This course explores troubleshooting in various areas such as: control circuits, combinations starters, control devices, special controls, DC motors, lightening systems with use of schematics, building drawings, and with emphasis on cutting troubleshooting time.

Basic PLC

Prerequisite: Basic Industrial Electricity

This course provides an overview of SLC and Micrologix hardware, communications, cabling, and system design. Introducing the student to RSLogix 500 and ladder programming. Instructor led labs that cover a variety of programming instructions used with SLC 500 and RSLogix 500 software,.



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