MARCH 2021

REGISTRATION DEADLINE JANUARY 29, 2021 @ 4:00PM

CLASS NAME	Industrial Blueprint Reading Online	Basic Gauges & Measurements Online
PRE-REQUISITE	**None**	**Industrial Blueprint Reading**
DESCRIPTION	This course will provide the student with a working knowledge and understanding of a variety of mechanical blueprints. Students will learn to recognize and identify symbols and specifications common to modern industrial blueprints. Topics will include: lines and symbols, views, form, position, title blocks, sketching, features, and sections.	Covers use of calipers, micrometers, English and metric gauges and other measuring instruments within a manufacturing environment. Topics include: English vs. metric, calibration of instruments, importance of repeatability, hands-on measurement of piecework, and instrument inspection and care.
COURSE ID #	AMC 100	AMC 130
DATES	March 8- May 6 Spring Break Mar 29-Apr1	March 8-May 6
DAYS	Thursdays	Wednesdays
TIMES	N/A	N/A
LOCATION	N/A	1-2 labs will be scheduled at LISD TECH Center
COST	**$740***	**$895***

***Discount available for JAMA Members**

To Register Contact:
Jack Townsley
LISD Tech Center
Phone: 517-265-1713
E-mail: jack.townsley@lisd.us

Basic Gauges & Measurement – 2 credits - 32 hours

Prerequisite: Industrial Blueprint Reading

This course covers use of calipers, micrometers, English and metric gauges and other measuring instruments within a manufacturing environment. Topics include: English vs. metric, calibration of instruments, importance of repeatability, hands-on measurement of piece work, and instrument inspection and care.

Machine Maintenance & Troubleshooting – 3 credits – 48 hours

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.

Basic Industrial Electricity – 2 credits – 32 hours

This course is designed to give maintenance people a basic understanding of safely working with and around electricity in an industrial environment. The course topics include: electrical theory, power and control circuits, DC and AC, batteries' inductance, capacitance, transformers, measuring of circuits, lighting, machines, single and three phase motors, control circuits and components, and maintenance procedures.

Drive Components & Bearings – 2 credits – 32 hours

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 Hydraulics & Pneumatics – 4 credits – 64 hours

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 symbols, and maintenance procedures will be provided.

BASIC GAUGES & MEASUREMENT – 32 HRS. $800

Basic Measurement
Precision measurement
Dimensional Gauging
Introduction to Print Reading
Print Dimensioning
Assembly Drawings and Fasteners
Intro. to Geometric Dimensioning & Tolerancing

MACHINE MAINTENANCE AND TROUBLESHOOTING – 40 HRS. $1,025

Preventive and Predictive Maintenance
Troubleshooting and Repairing Pumps
Troubleshooting and Repairing Gearboxes

BASIC INDUSTRIAL ELECTRICITY - 32 HRS. $800

AC/DC Electrical Systems
Motor Troubleshooting System
Electrical Power Distribution
Rotating Electric Machines

MECHANICAL DRIVE COMPONENTS AND BEARINGS – 32 HRS. $800

Intro to Mechanical Drive Systems
Key Fasteners
Power Transmission Systems
Introduction to V-Belt Drives
Introduction to Chain Drives
Spur Gear Drives
Multiple Shaft Drives
Heavy Duty V-Belt Drives
V-Belt Selection and Maintenance
Synchronous Belt Drives
Lubrication Concepts
Precision Shaft Alignment
Couplings
Heavy-Duty Chain Drives

INDUSTRIAL HYDRAULICS & PNEUMATICS – 64HRS. $1,395

Physical World of a Machine
Hydraulic Transmission of Force and Energy
Petroleum Base Hydraulic Fluid
Operation at the Suction Side of a Pump
Hydraulic Actuators
Control of Hydraulic Energy
Check Valves, Accumulators and Cylinders
Flow Control Valves
Directional Control Valves
Pressure control Valves
Pilot Operated Pressure Control Valves
Hydraulic Pumps
Hydraulic Motors
Reservoirs, Coolers, and Filters
Intro. to Compressed Air
Symbols
Actuators
Control Valves
Pneumatic Circuits
Air Preparation
Solenoids and Electronic Control
Pneumatic Logic
Compressed Air Production and Distribution

To Register Contact:
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Training packages can be customized for your business.