

MAINTENANCE
MAINTENANCE FUNDAMENTALS

Math Fundamentals	Thread Standards and Inspection	Walking and Working Surfaces	Introduction to Mechanical Properties	Electrical Units
Math: Fractions and Decimals	Intro to OSHA	Fire Safety and Prevention	Introduction to Metals	Safety for Electrical Work
Units of Measurement	Personal Protective Equipment	Flammable/Combustible Liquids	Ferrous Metals	Introduction to Mechanical Systems
Basics of Tolerance	Noise Reduction/Hearing Conservation	Hand and Power Tool Safety	Lean Manufacturing Overview	Safety for Mechanical Work
Blueprint Reading	Perspiratory Safety	Safety for Lifting Devices	ISO 9001:2015 Review	Forces of Machines
Basic Measurement	Lockout/Tagout Procedures	Powered Industrial Truck Safety	Approaches to Maintenance	
Calibration Fundamentals	SDS and Hazard Communication	Confined Spaces	Total Productive Maintenance	
Hole Standards and Inspection	Bloodborne Pathogens	Introduction to Physical Properties	5S Overview	

ELECTRICAL PRODUCTION

Algebra Fundamentals	Troubleshooting	DC Circuit Components	Parallel Circuit Calculations	Introduction to Electric Motors
Geometry: Lines and Angles	Introduction to CNC Machines	NEC Overview	Limit Switches and Proximity Sensors	Logic and Line Diagrams
Geometry: Triangles	Control Panel Functions for CNC Lathe	AC Fundamentals	Lubricant Fundamentals	Essentials of Leadership
Geometry: Circles and Polygons	Control Panel Functions for the CNC Mill	Electrical Instruments	Overview of Soldering	Essentials of Communication
Trigonometry: The Pythagorean Theorem	Shift Registers	Electrical Print Reading	Relays, Contractors, and Motor Starters	
Trigonometry: Sine, Cosine, Tangent	Introduction to Circuits	Conductor Selection	Control Devices	
Essentials of Heat Treatment of Steel	Introduction to Magnetism	Series Circuit Calculations	Distribution Systems	

MAINTENANCE PRODUCTION

Algebra Fundamentals	Parallel Circuit Calculations	Safety for Hydraulics and Pneumatics	Rigging Equipment	Introduction to Electric Motors
Geometry: Lines and Angles	Battery Selection	Introduction to Hydraulic Components	Rigging Inspection and Safety	Symbols and Diagrams for Motors
Geometry: Triangles	Bearing Applications	Introduction to Pneumatic Components	Rigging Mechanics	Logic and Line Diagrams
Geometry: Circles and Polygons	Spring Applications	Introduction to Fluid Conductors	Intro to Fastener Threads	DC Motor Applications
Trigonometry: The Pythagorean Theorem	Belt Drive Applications	Fittings for Fluid Systems	Overview of Threaded Fasteners	Solenoids
Trigonometry: Sine, Cosine, Tangent	Gear Applications	Preventative Maintenance for Fluid Systems	Tools for Threaded Fasteners	AC Motor Applications
Essentials of Heat Treatment of Steel	Reversing Motor Circuits	Lubricant Fundamentals	Overview of Non-Threaded Fasteners	Essentials of Leadership
Nonferrous Metals	Specs for Servomotors	Mechanical Power Variables	Understanding Torque	Essentials of Communication
Troubleshooting	Reduced Voltage Starting	Clutch and Brake Applications	Threaded Fastener Selection	
Series Circuit Calculations	The Forces of Fluid Power	Intro to Machine Rigging	Distribution Systems	

AUTOMATION TECHNICIAN

Bearing Applications	PLC Timers and Counters	End Effectors	Introduction to Pneumatic Components	Robot Troubleshooting
Spring Applications	Networking for PLCs	Robot Axes	Introduction to Fluid Conductors	Concepts of Robot Programming
Belt Drive Applications	Hand-Held Programmers for PLCs	Robot Sensors	Fittings for Fluid Systems	Intro to Fastener Threads
Gear Applications	Overview of PLC Registers	Robot Maintenance	Mechanical Power Variables	Overview of Threaded Fasteners
Introduction to PLCs	PLC Program Control Instructions	Robot Installations	Clutch and Brake Applications	Tools for Threaded Fasteners
Hardware for PLCs	Sequencer Instructions for PLCs	Vision Systems	Intro to Machine Rigging	Overview of Non-Threaded Fasteners
Basics of Ladder Logic	PLC Installation Practices	Industrial Network Integration	Rigging Equipment	Understanding Torque
Numbering Systems and Codes	PID for PLCs	The Forces of Fluid Power	Rigging Inspection and Safety	Threaded Fastener Selection
PLC Inputs and Outputs	Data Manipulation	Safety for Hydraulics and Pneumatics	Rigging Mechanics	
Basic Programming	Robot Components	Introduction to Hydraulic Components	Robot Safety	

ELECTRICAL TECHNICIAN

Nonferrous Metals	Specs for Servomotors	Fittings for Fluid Systems	Intro to Fastener Threads	Symbols and Diagrams for Motors
Battery Selection	Reduced Voltage Starting	Mechanical Power Variables	Overview of Threaded Fasteners	DC Motor Applications
Bearing Applications	The Forces of Fluid Power	Clutch and Brake Applications	Tools for Threaded Fasteners	Solenoids
Spring Applications	Safety for Hydraulics and Pneumatics	Intro to Machine Rigging	Overview of Non-Threaded Fasteners	AC Motor Applications
Belt Drive Applications	Introduction to Hydraulic Components	Rigging Equipment	Understanding Torque	
Gear Applications	Introduction to Pneumatic Components	Rigging Inspection and Safety	Threaded Fastener Selection	
Reversing Motor Circuits	Introduction to Fluid Conductors	Rigging Mechanics	Distribution Systems	

FLUID SYSTEMS TECHNICIAN

Benchwork and Layout Operations

Introduction to CNC Machines

Control Panel Functions for CNC Lathe

Control Panel Functions for the CNC Mill

Introduction to Circuits

Introduction to Magnetism

DC Circuit Components

NEC Overview

AC Fundamentals

Electrical Instruments

Electrical Print Reading

DC Power Sources

AC Power Sources

Conductor Selection

Limit Switches and Proximity Sensors

Hydraulic Power Variables

Hydraulic Power Sources

Pneumatic Power Variables

Pneumatic Power Sources

Hydraulic Control Valves

Hydraulic Schematics and Circuit Design

Pneumatic Control Valves

Pneumatic Schematics and Circuit Design

Actuator Applications

Hydraulic Fluid Selection

Contamination and Filter Selection

Hydraulic Principles and System Design

Welding Safety Essentials

PPE for Welding

Welding Fumes and Gases Safety

Electrical Safety for Welding

Introduction to Welding

Introduction to Welding Processes

Overview of Soldering

Plasma Cutting

SMAW Applications

GMAW Applications

What Is Oxyfuel Welding

Oxyfuel Welding Applications

Relays, Contactors, and Motor

Starters

Control Devices

Distribution Systems
