



SOUTHERN STATE
COMMUNITY COLLEGE

PROFESSIONAL DEVELOPMENT

LEARNING PLANS FOR MANUFACTURING JOB ROLES

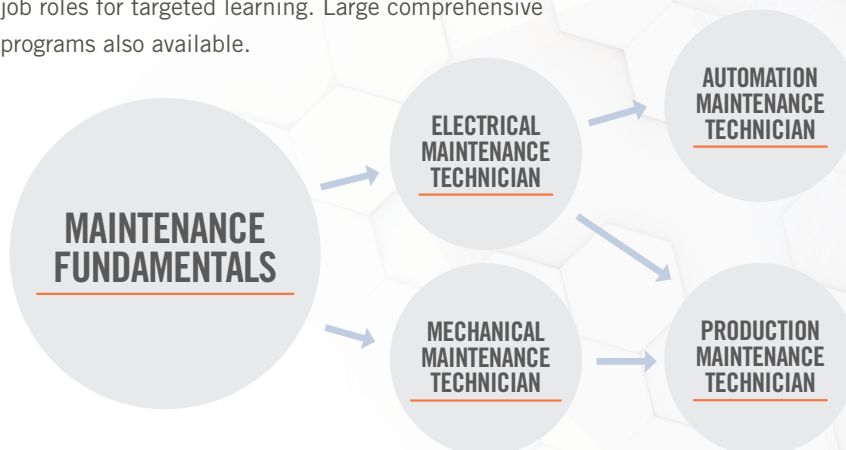
Online Training from Tooling U-SME offers a quick-start, progressive road map that allows manufacturers to build career paths for employees. This online training is intended to enhance your existing on the job training, to create a job progression plan and requires minimal preparation. It is efficient, effective training that has been developed with input from manufacturing experts.

FLEXIBLE AND CONVENIENT

Online classes are self-paced, typically taking 60 minutes to complete. They are easily and conveniently accessible on desktops and laptops, and on tablets and phones with the Tooling U-SME app.

CAREER PATHWAYS FOR MAINTENANCE JOB ROLES

Combine job roles for learning pathways, or offer single job roles for targeted learning. Large comprehensive programs also available.



Online Training offers:

- Content developed by industry experts
- Accessible anytime, anywhere
- Self-paced
- Predefined curriculum for each job role
- Engaging and interactive content
- Pre- and post-training knowledge assessments
- Access to Tooling U-SME's Learning Management System (LMS)
- Guidance from our Client Success team, including advice, insights, and ideas built on best practices and years of experience

Choose a starting point based on employee's experience or company goals for a quick-start training solution.

MAINTENANCE

MAINTENANCE FUNDAMENTALS

Maintenance Fundamentals provides an introduction to common manufacturing maintenance competencies, including Safety, Mathematics used in manufacturing, Electrical and Mechanical Systems, Inspection, Rigging, Quality & Lean, and Industry 4.0.

Math Fundamentals Math: Fractions and Decimals Units of Measurement OSHA Hazard Communication Labels Overview Hazardous Materials Handling Fall Protection Light Curtains Overview Introduction to OSHA Personal Protective Equipment Noise Reduction and Hearing Conservation Respiratory Safety	Lockout/Tagout Procedures SDS and Hazard Communication Bloodborne Pathogens Walking and Working Surfaces Fire Safety and Prevention Flammable/Combustible Liquids Hand and Power Tool Safety Safety for Lifting Devices Powered Industrial Truck Safety Confined Spaces Hand Tool Safety* Lockout Tagout Procedures* Power Tool Safety*	Safety Awareness in Manufacturing* Fire Safety* Introduction to Machine Rigging Rigging Equipment Rigging Inspection and Safety ISO 9001:2015 Review Approaches to Maintenance Introduction to Mechanical Systems Safety for Mechanical Work Forces of Machines Introduction to Physical Properties Introduction to Mechanical Properties	Introduction to Metals Ferrous Metals Lean Manufacturing Overview Total Productive Maintenance 5S Overview 5S and Hand Tool Identification* Skills Guide - Lean** Thread Standards and Inspection Types of Prints & Engineering Drawings Basics of Tolerance	Blueprint Reading Basic Measurement Calibration Fundamentals Rigging Equipment Safety and Inspection* Skills Guide - Blue Print Reading** Augmented Worker Electrical Units Safety for Electrical Work
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ELECTRICAL MAINTENANCE TECHNICIAN

Electrical Maintenance Technicians are responsible for the general upkeep of electrical system. They conduct routine maintenance, perform repairs, and fix faulty wiring when necessary. They may also be required to replace electrical components.

Introduction to Circuits Introduction to Magnetism DC Circuit Components NEC(R) Overview AC Fundamentals Electrical Instruments Electrical Print Reading DC Power Sources AC Power Sources Conductor Selection Wire Harness Components	Series Circuit Calculations Parallel Circuit Calculations Testing an AC Induction Motor with Multimeter* Voltage Checks for a Variable Frequency Drive Panel* Troubleshooting Skills Guide - Troubleshooting** Specs for Servomotors Timers and Counters Electronic Semiconductor Devices	Photonic Semiconductor Devices Photoelectric and Ultrasonic Devices Reduced Voltage Starting Solid-State Relays and Starters Relays, Contactors, and Motor Starters Control Devices Distribution Systems Limit Switches and Proximity Sensors Introduction to Electric Motors	Symbols and Diagrams for Motors Logic and Line Diagrams DC Motor Applications Solenoids AC Motor Applications Reversing Motor Circuits Arc Flash Safety High Voltage Safety Algebra Fundamentals What is Soldering? Safety for Soldering	Soldering Equipment Soldering Applications Solder and Flux Selection Soldering PCBs Lead-Free Soldering 230 Essentials of Leadership Essentials of Communication Overview of Soldering
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MECHANICAL MAINTENANCE TECHNICIAN

Mechanical Maintenance Technicians are responsible for maintaining, troubleshooting, and repairing manufacturing equipment. They may be required to install, troubleshoot and maintain mechanical devices, remove defective parts and make repairs.

Introduction to Fastener Threads Understanding Torque Threaded Fastener Selection The Forces of Fluid Power Safety for Hydraulics and Pneumatics Introduction to Hydraulic Components Introduction to Pneumatic Components Introduction to Fluid Conductors	Fittings for Fluid Systems Hole Standards and Inspection Thread Standards and Inspection Troubleshooting Skills Guide - Troubleshooting Essentials of Heat Treatment of Steel** Nonferrous Metals Introduction to Mechanical Systems Safety for Mechanical Work Forces of Machines	Power Transmission Components Lubricant Fundamentals Mechanical Power Variables Bearing Applications Spring Applications Belt Drive Applications Gear Applications Clutch and Brake Applications Distribution Systems Introduction to Electric Motors Symbols and Diagrams for Motors	Logic and Line Diagrams DC Motor Applications Solenoids AC Motor Applications Reversing Motor Circuits Introduction to PLCs Lifting and Moving Equipment Rigging Mechanics Algebra Fundamentals Geometry: Lines and Angles	Geometry: Triangles Geometry: Circles and Polygons Trigonometry: The Pythagorean Theorem Trigonometry: Sine, Cosine, Tangent Essentials of Leadership Essentials of Communication Assembly with Mechanical Fasteners*
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AUTOMATION MAINTENANCE TECHNICIAN

Automation Technicians maintain and repair robots or peripheral equipment, such as replacement of defective circuit boards, sensors, controllers, encoders, PLCs, or, end-of-arm tools, or servomotors.

Introduction to Fluid Conductors Introduction to Smart Manufacturing Cybersecurity for Manufacturing Basics Machine Learning and Artificial Intelligence Applications Data Collection Fundamentals Skills Guide - Troubleshooting** Belt Drive Applications Clutch and Brake Applications Deceleration Methods	Acceleration Methods Introduction to PLCs Shift Registers Sequencer Instructions for PLCs PLC Diagrams and Programs Hardware for PLCs Numbering Systems and Codes PLC Inputs and Outputs Basic Programming for PLCs PLC Counters and Timers Hand-Held Programmers of PLCs	Overview of PLC Registers PLC Program Control Instructions PLC Installation Practices PID for PLCs Data Manipulation Introduction to Robotics Automated Systems and Controls Robot Components End Effectors Robot Applications Robot Axes and Pathways	Robot Sensors Robot Maintenance Robot Power and Drive Systems Robot Installations Robot Control Systems Vision Systems Industrial Network Integration Robot Safety Robot Troubleshooting Concepts of Robot Programming	Robot Applications: Palletizing Robot Applications: Machine Tending Introduction to Collaborative Robots Skills Guide - Robotics** Essentials of Leadership Essentials of Communication Voltage Checks for a Variable Frequency Drive Panel
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PRODUCTION MAINTENANCE TECHNICIAN

A Production Maintenance Technician performs preventive maintenance and skilled repairs on complex electrical and mechanical production equipment and systems, sensor or feedback systems, hydraulics, or pneumatics.

Introduction to CNC Machines Control Panel Functions for the CNC Lathe Control Panel Functions for the CNC Mill The Forces of Fluid Power Preventive Maintenance for Fluid Systems Introduction to Fluid Systems Piping and Instrumentation Diagrams Actuator Applications Hydraulic Power Variables	Hydraulic Power Sources Pneumatic Power Variables Pneumatic Power Sources Hydraulic Control Valves Hydraulic Schematics and Basic Circuit Design Pneumatic Control Valves Pneumatic Schematics and Basic Circuit Design Hydraulic Fluid Selection Contamination and Filter Selection Hydraulic Principles and System	Design Interpreting Prints Conducting Kaizen Events Skills Guide - Troubleshooting** Benchwork and Layout Operations Relays, Contactors, and Motor Starters Control Devices Limit Switches and Proximity Sensors Motor Drive Systems and Maintenance	Electrical Maintenance for Motor Drive Systems Mechanical Maintenance for Motor Drive Systems Essentials of Leadership Essentials of Communication Overview of Soldering Welding Safety Essentials PPE for Welding Welding Fumes and Gases Safety Electrical Safety for Welding Introduction to Welding	Introduction to Welding Processes Plasma Cutting SMAW Applications GMAW Applications What Is Oxyfuel Welding? Shielded Metal Arc Welding* Gas Metal Arc Welding*
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*: VR Lab **: Skills Guide