



PROFESSIONAL DEVELOPMENT

LEARNING PLANS FOR MANUFACTURING JOB ROLES

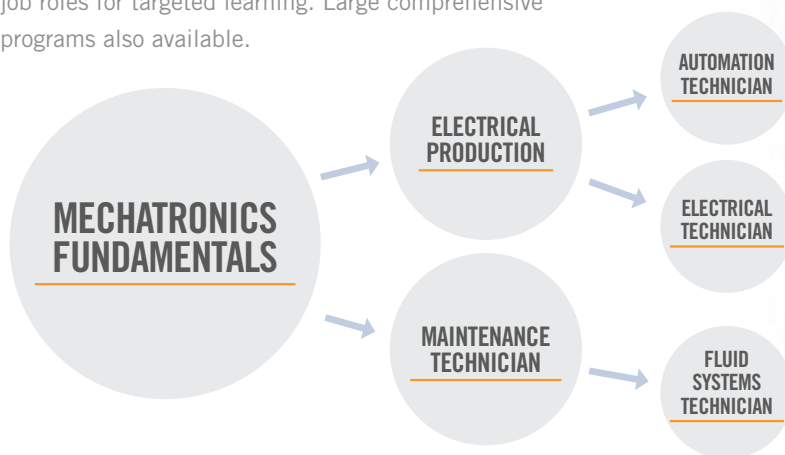
Online Training from MACNY and Tooling U-SME offers a quick-start, progressive road map that allows manufacturers to build career paths for employees. This online training is intended to enhance your existing on the job training, to create a job progression plan and requires minimal preparation. It is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

MECHATRONICS

MECHATRONICS FUNDAMENTALS

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

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

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

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

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

Control Panel Functions for the CNC Lathe Introduction to CNC Machines AC Fundamentals AC Power Sources Conductor Selection DC Circuit Components DC Power Sources Electrical Instruments	Electrical Print Reading Introduction to Circuits Introduction to Magnetism NEC(R) Overview Actuator Applications Contamination and Filter Selection Hydraulic Control Valves Hydraulic Fluid Selection	Hydraulic Power Sources Hydraulic Power Variables Hydraulic Principles and System Design Hydraulic Schematics and Basic Circuit Design Pneumatic Control Valves Pneumatic Power Sources Pneumatic Power Variables	Pneumatic Schematics and Basic Circuit Design Benchmark and Layout Operations Control Devices Distribution Systems Limit Switches and Proximity Sensors	Relays, Contactors, and Motor Starters Electrical Safety for Welding GMAW Applications Introduction to Welding Introduction to Welding Processes Overview of Soldering	Oxyfuel Welding Applications Plasma Cutting PPE for Welding SMAW Applications Welding Fumes and Gases Safety Welding Safety Essentials What Is Oxyfuel Welding?
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To begin your training program or for more information, call Laury Ferguson, Associate Director of Apprenticeship, at **315.474.4201, ext. 49** or email lferguson@macny.org.