



PROFESSIONAL DEVELOPMENT

LEARNING PLANS FOR MANUFACTURING JOB ROLES

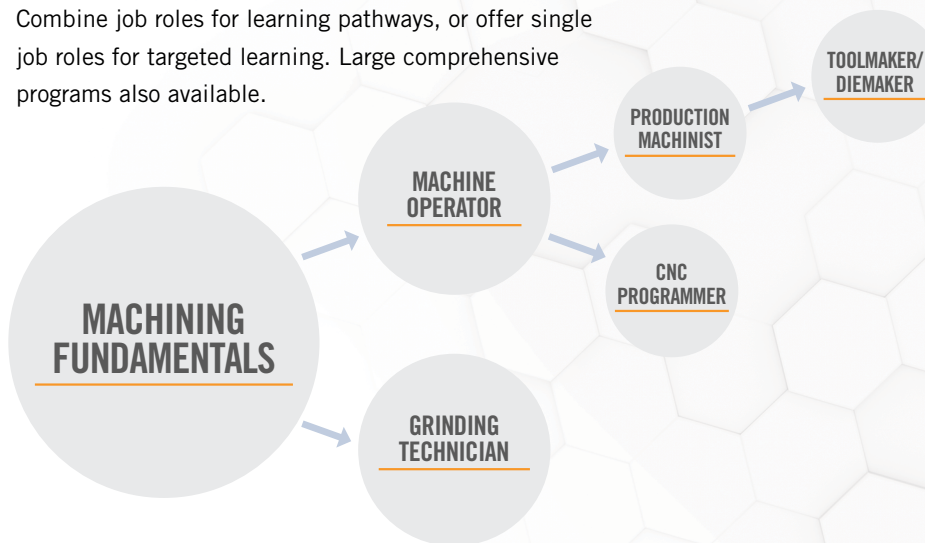
Online Training from CIFT and Tooling U-SME offers a quick-start, progressive road map that allows manufacturers to build career paths for employees. This online training is intended to enhance your existing on the job training, to create a job progression plan and requires minimal preparation. It is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

MACHINING

MACHINING FUNDAMENTALS

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|---------------------------------|---------------------------------------|----------------------------|--|-------------------------------------|
| Basic Measurement | Essentials of Heat Treatment of Steel | Overview of Machine Tools | Noise Reduction and Hearing Conservation | Geometry: Lines and Angles |
| Basics of Tolerance | Ferrous Metals | ISO 9001 Review | Personal Protective Equipment | Geometry: Triangles |
| Blueprint Reading | Introduction to Mechanical Properties | Bloodborne Pathogens | Powered Industrial Truck Safety | Math Fundamentals |
| Calibration Fundamentals | Band Saw Operation | Fire Safety and Prevention | Safety for Lifting Devices | Math: Fractions and Decimals |
| Hole Standards and Inspection | Basic Cutting Theory | Hand and Power Tool Safety | SDS and Hazard Communication | Trigonometry: Sine, Cosine, Tangent |
| Thread Standards and Inspection | Cutting Processes | Intro to OSHA | Walking and Working Surfaces | Units of Measurement |
| 5S Overview | Introduction to Metal Cutting Fluids | Lockout/Tagout Procedures | | |
| Lean Manufacturing Overview | Metal Cutting Fluid Safety | | | |

GRINDING TECHNICIAN

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|-----------------------------------|----------------------------------|-----------------------------------|--------------------------------|------------------------------------|
| Basic Grinding Theory | Grinding Nonferrous Metals | Setup for the Cylindrical Grinder | Surface Texture and Inspection | Chucks, Collets, and Vises |
| Basics of the Centerless Grinder | Grinding Processes | Setup for the Surface Grinder | Metrics for Lean | Clamping Basics |
| Basics of the Cylindrical Grinder | Grinding Safety | Surface Grinder Operation | Process Flow Charting | Locating Devices |
| Basics of the Surface Grinder | Grinding Variables | Basics of G Code Programming | SPC Overview | Supporting and Locating Principles |
| Centerless Grinder Operation | Grinding Wheel Geometry | Introduction to CNC Machines | Strategies for Setup Reduction | |
| Cylindrical Grinder Operation | Grinding Wheel Materials | Introduction to Fastener Threads | Troubleshooting | |
| Dressing and Truing | Introduction to Grinding Fluids | Introduction to GD&T | Essentials of Communication | |
| Grinding Ferrous Metals | Setup for the Centerless Grinder | Major Rules of GD&T | Essentials of Leadership | |

MACHINE OPERATOR

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| Basics of G Code Programming | Coordinates for the CNC Lathe | SPC Overview | Manual Mill Operation | Clamping Basics |
| Basics of the CNC Lathe | Coordinates for the CNC Mill | Benchwork and Layout Operations | Manual Mill Setup | Locating Devices |
| Basics of the CNC Mill | Introduction to CNC Machines | Engine Lathe Basics | Classification of Steel | Supporting and Locating Principles |
| Control Panel Functions for the CNC Lathe | Offsets on the CNC Lathe | Engine Lathe Operation | Intro to EDM | |
| Control Panel Functions for the CNC Mill | Offsets on the CNC Mill | Engine Lathe Setup | Safety for Metal Cutting | |
| | Introduction to Fastener Threads | Holemaking on the Manual Mill | Machine Guarding | |
| | Surface Texture and Inspection | Manual Mill Basics | Chucks, Collets, and Vises | |

CNC PROGRAMMER

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| Calculations for Programming the Lathe | Creating a CNC Milling Program | Introduction to GD&T | Introduction to Metals | Automated Systems and Control |
| Calculations for Programming the Mill | Creating a CNC Turning Program | Major Rules of GD&T | Speed and Feed for the Lathe | Robot Axes |
| Canned Cycles for the Lathe | Introduction to CAD and CAM for Machining | Intro to Six Sigma | Speed and Feed for the Mill | |
| Canned Cycles for the Mill | In-Line Inspection Applications | Metrics for Lean | Quality and Customer Service | |

PRODUCTION MACHINIST

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| Calculations for Programming the Lathe | Creating a CNC Turning Program | Troubleshooting | Cutting Tool Materials | Speed and Feed for the Lathe |
| Calculations for Programming the Mill | Introduction to GD&T | Taper Turning on the Engine Lathe | Drill Tool Geometry | Speed and Feed for the Mill |
| Canned Cycles for the Lathe | Major Rules of GD&T | Threading on the Engine Lathe | Impact of Workpiece Materials | Essentials of Communication |
| Canned Cycles for the Mill | Metrics for Lean | ANSI Insert Selection | Lathe Tool Geometry | Essentials of Leadership |
| Creating a CNC Milling Program | Process Flow Charting | Basic Cutting Theory | Mill Tool Geometry | |
| | Strategies for Setup Reduction | Carbide Grade Selection | Optimizing Tool Life and Process | |

TOOLMAKER AND DIEMAKER

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|-----------------------------------|-------------------------------|--------------------------|-----------------------------------|----------------------------|
| Basic Grinding Theory | Dressing and Truing | Grinding Safety | Introduction to Grinding Fluids | Die Cutting Variables |
| Basics of the Cylindrical Grinder | Grinding Ferrous Metals | Grinding Variables | Setup for the Cylindrical Grinder | Material Tests for Welding |
| Basics of the Surface Grinder | Grinding Nonferrous Materials | Grinding Wheel Geometry | Setup for the Surface Grinder | Fixture Design Basics |
| Cylindrical Grinder Operation | Grinding Processes | Grinding Wheel Materials | Surface Grinder Operation | |

— New content is always being added. Check with your representative for the most current list of classes. —