



PROFESSIONAL DEVELOPMENT

LEARNING PLANS FOR MANUFACTURING JOB ROLES

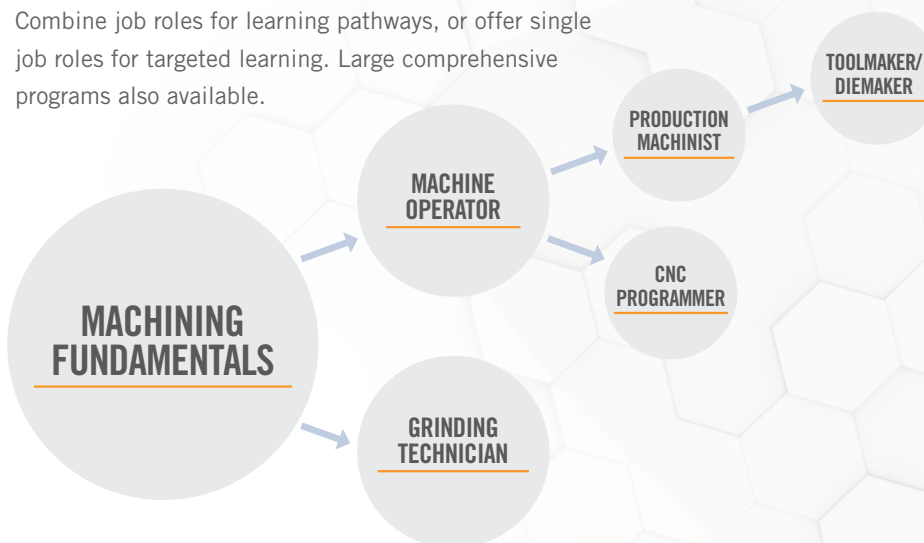
Online Training from DVIRC and Tooling U-SME offers a quick-start, progressive road map that allows manufacturers to build career paths for employees. This online training is intended to enhance your existing on the job training, to create a job progression plan and requires minimal preparation. It is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

MACHINING FUNDAMENTALS

5S Overview	Cutting Processes	Hole Standards and Inspection	Math: Fractions and Decimals	SDS and Hazard Communication
Band Saw Operation	Essentials of Heat Treatment of Steel	Intro to OSHA	Metal Cutting Fluid Safety	Thread Standards and Inspection
Basic Cutting Theory	Ferrous Metals	Introduction to Mechanical Properties	Noise Reduction and Hearing Conservation	Trigonometry: Sine, Cosine, Tangent
Basic Measurement	Fire Safety and Prevention	Introduction to Metal Cutting Fluids	Overview of Machine Tools	Units of Measurement
Basics of Tolerance	Geometry: Circles and Polygons	ISO 9001: 2015 Review	Personal Protective Equipment	Walking and Working Surfaces
Bloodborne Pathogens	Geometry: Lines and Angles	Lean Manufacturing Overview	Powered Industrial Truck Safety	
Blueprint Reading	Geometry: Triangles	Lockout/Tagout Procedures	Safety for Lifting Devices	
Calibration Fundamentals	Hand and Power Tool Safety	Math Fundamentals		

GRINDING TECH

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

MACHINE OPERATOR

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

CNC PROGRAMMER

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

PRODUCTION MACHINIST

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

TOOL AND DIE MAKER

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