



**CENTER for
ECONOMIC
GROWTH**

PROFESSIONAL DEVELOPMENT

LEARNING PLANS FOR MANUFACTURING JOB ROLES

Online Training from the Center for Economic Growth 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 PLASTICS PROCESSING JOB ROLES

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

PLASTICS FUNDAMENTALS

Manufacturing
Awareness

MOLD/
EXTRUSION
OPERATOR

MOLD MAKER

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.

PLASTICS PROCESSING

PLASTICS PROCESSING FUNDAMENTALS

Basic Measurement
Basics of Tolerance
Blueprint Reading
Calibration Fundamentals
Hole Standards and Inspection
Thread Standards and Inspection

5S Overview
Lean Manufacturing Overview
Introduction to Mechanical Properties
Introduction to Plastics
ISO 9001 Review
Bloodborne Pathogens

Fire Safety and Prevention
Hand and Power Tool Safety
Intro to OSHA
Lockout/Tagout Procedures
Noise Reduction and Hearing Conservation

Personal Protective Equipment
Powered Industrial Truck Safety
Safety for Lifting Devices
SDS and Hazard Communication
Walking and Working Surfaces
Geometry: Circles and Polygons

Geometry: Lines and Angles
Geometry: Triangles
Math Fundamentals
Math: Fractions and Decimals
Trigonometry: Sine, Cosine, Tangent
Units of Measurement

MOLD EXTRUSION OPERATOR

Advanced Thermoset Resins for Composites
Composite Inspection and Defect Prevention
Intro to Compression Molding
Electrical Units

Safety for Electrical Work
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

Thermoplastics
Thermosets
Forces of Machines
Introduction to Mechanical Systems
Safety for Mechanical Work

Intro to Machine Rigging
Rigging Equipment
Rigging Inspection and Safety
Rigging Mechanics

MOLD MAKER

Basics of the Cylindrical Grinder
Basics of the Surface Grinder
Cylindrical Grinder Operation
Dressing and Truing
Grinding Processes

Grinding Safety
Grinding Variables
Grinding Wheel Geometry
Grinding Wheel Materials
Grinding Wheel Selection

Introduction to Grinding Fluids
Setup for the Cylindrical Grinder
Setup for the Surface Grinder
Surface Grinder Operation
Calculations for Programming the Mill

Canned Cycles for the Mill
Creating a CNC Milling Program
Introduction to GD&T
Major Rules of GD&T
Troubleshooting

Basic Cutting Theory
Carbide Grade Selection
Cutting Tool Materials
Speed and Feed for the Lathe
Speed and Feed for the Mill

