



**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

## PROFESSIONAL DEVELOPMENT

### LEARNING PLANS FOR MANUFACTURING JOB ROLES

Online Training from The Ohio State University Business Training & Educational Services 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

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

