



## PROFESSIONAL DEVELOPMENT

### LEARNING PLANS FOR MANUFACTURING JOB ROLES

Training Packages from Tooling U-SME offer quick-start, progressive road maps in various functional areas that allow manufacturers to build career paths for employees. They are intended to enhance your existing OJT and help you create a job progression plan. Unlike many other training programs, these packages require minimal preparation. They are efficient, effective training, 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 ENGINEERING JOB ROLES

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

**ENGINEERING  
FUNDAMENTALS**

**ENGINEERING  
TECHNICIAN**

### 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.

# ENGINEERING

## ENGINEERING FUNDAMENTALS

Additive Manufacturing Methods and Materials

Additive Manufacturing Safety

Introduction to Additive Manufacturing

Introduction to CAD and CAM for Machining

AC Fundamentals

DC Circuit Components

Electrical Units

Introduction to Circuits

Introduction to Assembly

Basics of Tolerance

Blueprint Reading

Lean Manufacturing Overview

Essentials of Heat Treatment of Steel

Introduction to Ceramics

Introduction to Composites

Introduction to Mechanical Properties

Introduction to Metals

Introduction to Physical Properties

Introduction to Plastics

Cutting Processes

Algebra Fundamentals

Geometry: Circles and Polygons

Geometry: Lines and Angles

Geometry: Triangles

Statistics

Trigonometry: Sine, Cosine, Tangent

Trigonometry: The Pythagorean Theorem

Units of Measurement

## ENGINEERING TECHNICIAN

Basics of G Code Programming

Parallel Circuit Calculations

Series Circuit Calculations

Introduction to Hydraulic Components

Introduction to Pneumatic Components

The Forces of Fluid Power

Introduction to GD&T

SPC Overview

Troubleshooting

Classification of Steel

Ferrous Metals

Hardness Testing

Nonferrous Metals

Thermoplastics

Thermosets

Forces of Machines

Power Transmission Components

Drill Tool Geometry

Lathe Tool Geometry

Mill Tool Geometry

Basics of Ladder Logic

Introduction to PLCs

PLC Timers and Counters

Basic Ladder Diagram Programming for Siemens PLCs

Basics of Siemens PLCs

Siemens PLC Communication

Equipment/Tool Design and

Development

ISO 9001 Review

Process Design and Development

Product Design and Development

Production System Design and Development

Quality and Customer Service

Automated Systems and Control

Hand and Power Tool Safety

Applied and Engineering Sciences

Manufacturing Process Applications: Part I

Manufacturing Process Applications: Part II

Punch and Die Operations

Manufacturing Management

Personal Effectiveness

Introduction to Welding Processes

Fixture Design Basics

Supporting and Locating Principles

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

