## **ENGINEERING**



Tennessee Manufacturing Extension Partnership

## 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





Tennessee Manufacturing Extension Partnership Website: tmep.cis.tennessee.edu Contact: tmep@tennessee.edu

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### **ENGINEERING FUNDAMENTALS**

Additive Manufacturing Methods and Materials

Additive Manufacturing Safetv 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

Process Design and Development

Product Design and Development

ISO 9001 Review

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

Lathe Tool Geometry

Power Transmission Components Drill 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

Production System Design and Development Quality and Customer Service Automated Systems and Control Siemens PLC Communication Hand and Power Tool Safety Equipment/Tool Design and Applied and Engineering Sciences Development

Manufacturing Process Applications: Manufacturing Process Applications:

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. —



