# ENGINEERING

Rowan-Cabarrus COMMUNITY COLLEGE

## PROFESSIONAL DEVELOPMENT

### LEARNING PLANS FOR MANUFACTURING JOB ROLES

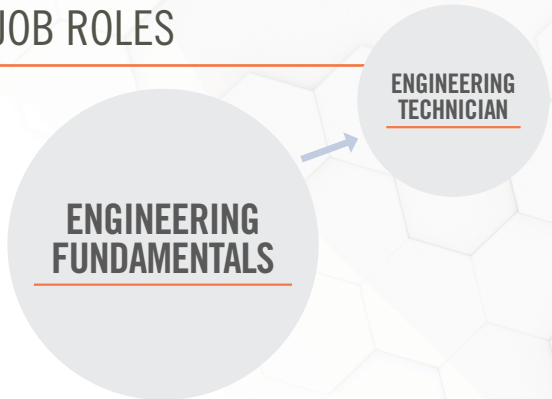
Training Packages from Tooling U-SME offer quick-start, progressive road maps in various functional areas that allow manufacturers to build career paths for employees. They are intended to enhance your existing OJT and help you create a job progression plan. Unlike many other training programs, these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




## 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

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To begin your training program or for more information, contact Jon Ramm at **704-216-3910** or **jon.ramm@rccc.edu**

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. —

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