WELDING

VMEC
VERMONT MANUFACTURING EXTENSION CENTER

PROFESSIONAL DEVELOPMENT

LEARNING PLANS FOR MANUFACTURING JOB ROLES

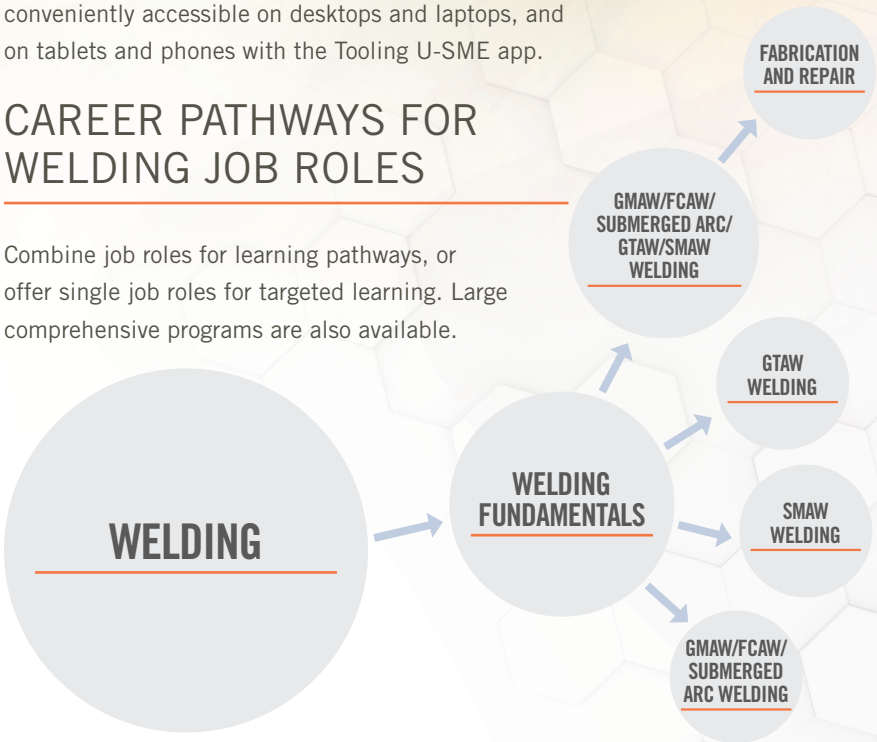
Training Packages from Tooling U-SME offer quick-start, progressive road maps in various functional areas that allow manufacturers to build career paths for employees. They are intended to enhance your existing OJT and help you create a job progression plan. Unlike many other training programs, these 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 WELDING 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 Carla C. Wuthrich at **802.734.1227** or **cwuthrich@vmec.org**

Choose a starting point based on employee's experience or company goals for a quick-start training solution.

WELDING

WELDING FUNDAMENTALS

- Introduction to CAD and CAM for Machining
- Blueprint Reading
- Safety for Metal Cutting
- Bloodborne Pathogens
- Confined Spaces
- Environmental Safety Hazards
- Ergonomics
- Fire Safety and Prevention
- Flammable/Combustible Liquids
- Hand and Power Tool Safety
- Intro to OSHA
- Lockout/Tagout Procedures
- Machine Guarding
- Noise Reduction and Hearing Conservation
- Personal Protective Equipment
- Powered Industrial Truck Safety
- Respiratory Safety
- Safety for Lifting Devices
- SDS and Hazard Communication
- Walking and Working Surfaces
- Units of Measurement
- Electrical Safety for Welding
- Geometry Fundamentals for Welding
- Math Fundamentals for Welding
- Overview of Weld Defects
- Oxyfuel Cutting Applications
- Plasma Cutting
- PPE for Welding
- Thermal Cutting Overview
- Welding Fumes and Gases Safety
- Welding Safety Essentials
- Welding Symbols and Codes

GMAW FCAW SUB ARC

- AC Fundamentals
- AC Power Sources
- Battery Selection
- Conductor Selection
- DC Circuit Components
- DC Power Sources
- Electrical Instruments
- Electrical Print Reading
- Electrical Units
- Introduction to Circuits
- Introduction to Magnetism
- NEC(R) Overview
- Parallel Circuit Calculations
- Safety for Electrical Work
- Series Circuit Calculations
- Total Productive Maintenance
- Troubleshooting
- Ferrous Metals
- Introduction to Metals
- Nonferrous Metals
- Safety for Mechanical Work
- Approaches to Maintenance
- Essentials of Communication
- Personal Effectiveness
- Advanced GMAW Applications
- Electrical Power for Arc Welding
- FCAW Applications
- GMAW Applications
- Introduction to FCAW
- Introduction to GMAW
- Introduction to Welding
- Introduction to Welding Processes
- Material Tests for Welding
- Overview of Weld Types
- Welding Ferrous Metals
- Welding Nonferrous Metals

GTAW

- AC Fundamentals
- AC Power Sources
- Battery Selection
- Conductor Selection
- DC Circuit Components
- DC Power Sources
- Electrical Instruments
- Electrical Print Reading
- Electrical Units
- Introduction to Circuits
- Introduction to Magnetism
- NEC(R) Overview
- Parallel Circuit Calculations
- Safety for Electrical Work
- Series Circuit Calculations
- Total Productive Maintenance
- Troubleshooting
- Classification of Steel
- Exotic Alloys
- Ferrous Metals
- Introduction to Mechanical Properties
- Introduction to Metals
- Introduction to Physical Properties
- Nonferrous Metals
- Safety for Mechanical Work
- Approaches to Maintenance
- Essentials of Communication
- Personal Effectiveness
- GTAW Applications
- Introduction to GTAW
- Introduction to Welding
- Introduction to Welding Processes
- Material Tests for Welding
- Overview of Weld Types
- Welding Ferrous Metals
- Welding Nonferrous Metals

SMAW

- AC Fundamentals
- AC Power Sources
- Battery Selection
- Conductor Selection
- DC Circuit Components
- DC Power Sources
- Electrical Instruments
- Electrical Print Reading
- Electrical Units
- Introduction to Circuits
- Introduction to Magnetism
- NEC(R) Overview
- Parallel Circuit Calculations
- Safety for Electrical Work
- Series Circuit Calculations
- Total Productive Maintenance
- Troubleshooting
- Ferrous Metals
- Introduction to Mechanical Properties
- Introduction to Metals
- Introduction to Physical Properties
- Nonferrous Metals
- Safety for Mechanical Work
- Approaches to Maintenance
- Essentials of Communication
- Personal Effectiveness
- Electrical Power for Arc Welding
- Introduction to SMAW
- Introduction to Welding
- Introduction to Welding Processes
- Material Tests for Welding
- Overview of Weld Types
- SMAW Applications
- Welding Ferrous Metals
- Welding Nonferrous Metals

FABRICATION AND REPAIR

- Introduction to Assembly
- Safety for Assembly
- Classification of Steel
- Essentials of Heat Treatment of Steel
- Band Saw Operation
- Algebra Fundamentals
- Applied and Engineering Sciences
- Geometry: Circles and Polygons
- Geometry: Lines and Angles
- Geometry: Triangles
- Math Fundamentals
- Math: Fractions and Decimals
- Statistics
- Trigonometry: Sine Bar Applications
- Trigonometry: Sine, Cosine, Tangent
- Trigonometry: The Pythagorean Theorem
- Conflict Resolution for Different Groups
- Conflict Resolution Principles
- Essentials of Leadership
- Team Leadership
- Fabrication Process
- Fixture Body Construction
- Fixture Design Basics
- Introduction to Workholding
- Locating Devices
- 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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