



## PROFESSIONAL DEVELOPMENT

### LEARNING PLANS FOR MANUFACTURING JOB ROLES

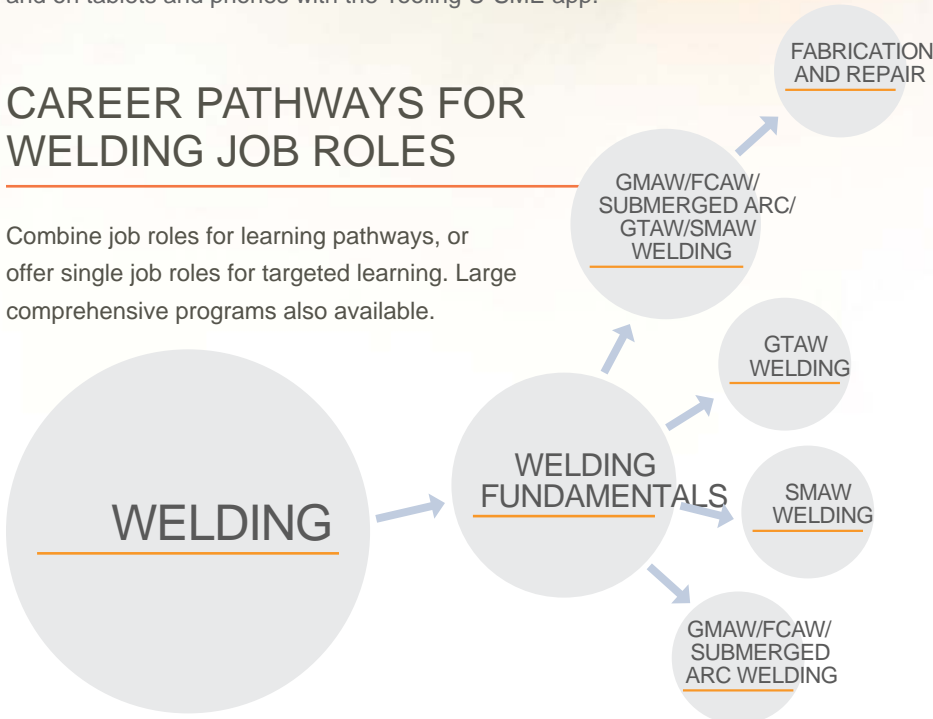
Online Training from Columbus State Community College and Tooling U-SME offers a quick-start, progressive road map that allows manufacturers to build career paths for employees. This online training is intended to enhance your existing on the job training, to create a job progression plan and requires 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 WELDING JOB ROLES

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

## WELDING

Basic Measurement	SDS and Hazard Communication	Introduction to Mechanical Properties	Welding Safety Essentials	Geometry Fundamentals for Welding
Calibration Fundamentals	Walking and Working Surfaces	Introduction to Metals	PPE for Welding	Welding Ferrous Metals
Intro to OSHA	Fire Safety and Prevention	Ferrous Metals	Welding Fumes and Gases Safety	Welding Nonferrous Metals
Personal Protective Equipment	Flammable/Combustible Liquids	Nonferrous Metals	Electrical Safety for Welding	Overview of Weld Types
Noise Reduction and Hearing Conservation	Safety for Lifting Devices	Lean Manufacturing Overview	Introduction to Welding	Electrical Power for Arc Welding
Lockout/Tagout Procedures	Powered Industrial Truck Safety	ISO 9001:2015 Review	Introduction to Welding Processes	
	Introduction to Physical Properties	5S Overview	Math Fundamentals for Welding	

## WELDING FUNDAMENTALS

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

## GMAW FCAW SUB ARC

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

## GTAW

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

## SMAW

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

## FABRICATION AND REPAIR

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