**ADDITIVE MANUFACTURING FUNDAMENTALS**

* Additive Manufacturing as a Secondary Process
* Additive Manufacturing Methods and Materials
* Additive Manufacturing Safety
* Design for Additive Manufacturing
* Integrating Additive Manufacturing with Traditional
* Manufacturing
* Introduction to Additive Manufacturing
* The Basic Additive Manufacturing Process
* Basic Measurement Blueprint Reading
* Calibration Fundamentals
* Hole Standards and Inspection
* Inspecting with CMMs
* Introduction to GD&T
* Surface Texture and Inspection
* The Basics of Tolerance
* Thread Standards and Inspection
* Continuous Process Improvement: Identifying and Eliminating Waste
* Lean Manufacturing Overview
* Total Productive Maintenance
* Classification of Steel
* Essentials of Heat Treatment of Steel
* Exotic Alloys
* Ferrous Metals
* Hardness Testing
* Introduction to Mechanical Properties
* Introduction to Metals
* Introduction to Physical Properties
* Nonferrous Metals
* Approaches to Maintenance
* Applied and Engineering Sciences
* Manufacturing Process Applications: Part I
* Manufacturing Process Applications: Part II
* Math: Fractions and Decimals
* Math Fundamentals
* Units of Measurement
* Approaches to Maintenance

**ASSEMBLY**

* Types of Adhesives
* Coating Defects
* Intro to Coating
* Composition Processes for Applying Coatings
* Surface Preparation for Coatings
* Introduction to Assembly
* Introduction to Fastener Threads
* Overview of Non-Threaded Fasteners
* Overview of Threaded Fasteners
* Safety for Assembly
* Tools for Threaded Fasteners
* Basic Measurement
* Basics of Tolerance
* Blueprint Reading
* Calibration Fundamentals
* Hole Standards and Inspection
* Thread Standards and Inspection
* 5S Overview
* Lean Manufacturing Overview
* Ferrous Metals
* Introduction to Mechanical Properties
* ISO 9001 Review
* Intro to Machine Rigging
* Rigging Equipment
* Bloodborne Pathogens
* Fire Safety and Prevention
* Hand and Power Tool Safety
* Intro to OSHA
* Lockout/Tagout Procedures
* Noise Reduction and Hearing Conservation
* Personal Protective Equipment
* Powered Industrial Truck Safety
* Safety for Lifting Devices
* SDS and Hazard Communication
* Walking and Working Surfaces
* Math Fundamentals
* Math: Fractions and Decimals Units of Measurement
* Basics of the Bonding Process
* Steps for Adhesive Application
* DC Circuit Components
* Electrical Units
* Introduction to Circuits
* Safety for Electrical Work
* Properties for Fasteners
* Fittings for Fluid Systems
* Introduction to Fluid Conductors
* Introduction to Hydraulic Components
* Introduction to Pneumatic Components
* Safety for Hydraulics and Pneumatics
* Introduction to GD&T
* Major Rules of GD&T
* Metrics for Lean
* Troubleshooting
* Introduction to Mechanical Systems
* Lubricant Fundamentals
* Safety for Mechanical Work
* Lifting and Moving Equipment
* Rigging Inspection and Safety
* Geometry: Circles and Polygons Geometry: Lines and Angles
* Geometry: Triangles Trigonometry: Sine, Cosine, Tangent Overview of Soldering

**COMPOSITES PROCESSING FUNDAMENTALS**

* Advanced Materials for Composites
* Advanced Thermoset
* Resins for Composites
* Composite Inspection and Defect Prevention
* Intro to Compression Molding
* Intro to Lay-up and Spray-up
* Molding Overview of Composite Processes
* Repair Methods for Composites
* Safety for Composite
* Processing Surface
* Finishing Composites
* Traditional Composites
* Vacuum Bagging Technique: Single-sided Bagging
* Basic Measurement
* Basics of Tolerance
* Blueprint Reading
* Calibration Fundamentals
* Hole Standards and Inspection
* Thread Standards and Inspection
* 5S Overview
* Lean Manufacturing Overview
* Introduction to Composites
* Introduction to Mechanical Properties
* Band Saw Operation
* Cutting Processes
* ISO 9001 Review
* Bloodborne Pathogens
* Fire Safety and Prevention
* Hand and Power Tool Safety
* Intro to OSHA
* Lockout/Tagout Procedures
* Noise Reduction and Hearing
* Conservation
* Personal Protective Equipment
* Powered Industrial Truck Safety
* Safety for Lifting Devices
* SDS and Hazard Communication
* Walking and Working Surfaces
* Geometry: Circles and Polygons
* Geometry: Lines and Angles
* Geometry: Triangles
* Math Fundamentals
* Math: Fractions and Decimals
* Trigonometry: Sine, Cosine, Tangent
* Units of Measurement

**ENGINEERING**

* 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
* 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

**FORMING, FABRICATING, STAMPING**

* Basic Measurement
* Basics of Tolerance
* Blueprint Reading
* Calibration Fundamentals
* Hole Standards and Inspection
* Thread Standards and Inspection
* 5S Overview
* Lean Manufacturing Overview
* Ferrous Metals
* Introduction to Mechanical Properties
* Introduction to Physical Properties
* Band Saw Operation
* ISO 9001 Review
* Bloodborne Pathogens
* Fire Safety and Prevention
* Hand and Power Tool Safety
* Intro to OSHA
* Lockout/Tagout Procedures
* Noise Reduction and Hearing Conservation
* Personal Protective Equipment
* Powered Industrial Truck Safety
* Safety for Lifting Devices
* SDS and Hazard Communication
* Walking and Working Surfaces
* Geometry: Circles and Polygons
* Geometry: Lines and Angles
* Geometry: Triangles
* Manufacturing Process Applications: Part I
* Math Fundamentals
* Math: Fractions and Decimals
* Trigonometry: Sine, Cosine, Tangent
* Units of Measurement
* Electrical Units
* Introduction to Circuits
* Introduction to Hydraulic Components
* Introduction to GD&T
* Major Rules of GD&T
* Total Productive Maintenance
* Troubleshooting
* Introduction to Mechanical Systems
* Bending Fundamentals
* Die Bending Operations
* Operating the Press Brake
* Press Brake Components
* Press Brake Safety
* Press Brake Specifications
* Approaches to Maintenance
* Coil Handling Equipment
* Coil Loading Procedures
* Die Components
* Die Cutting Variables
* Die Setting Procedures
* Monitoring Press Operations
* Press Basics Punch and Die Operations
* Stamping Safety
* Essentials of Communication
* Essentials of Leadership
* Introduction to Workholding
* Supporting and Locating Principles
* Basic Grinding Theory
* Basics of the Cylindrical Grinder
* Basics of the Surface Grinder
* Cylindrical Grinder Operation
* Dressing and Truing
* Grinding Ferrous Metals
* Grinding Nonferrous Materials
* Grinding Processes
* Grinding Safety
* Grinding Variables
* Grinding Wheel Geometry
* Grinding Wheel Materials
* Introduction to Grinding Fluids
* Setup for the Cylindrical Grinder
* Setup for the Surface Grinder
* Surface Grinder Operation
* Calculations for Programming the mill
* Canned Cycles for the Mill
* Creating a CNC Milling Program
* Holemaking on the Manual Mill
* Basic Cutting Theory
* Carbide Grade Selection
* Cutting Tool Materials
* Speed and Feed for the Lathe
* Speed and Feed for the Mill
* Material Tests for Welding

**Industrial Safety Training**

* Intro to OSHA
* Ergonomics
* Personal Protective Equipment
* Noise Reduction and Hearing Conservation
* Respiratory Safety
* Lockout/Tagout Procedures
* SDS and Hazard Communication
* Bloodborne Pathogens
* Walking and Working Surfaces
* Fire Safety and Prevention
* Flammable/Combustible Liquids
* Hand and Power Tool Safety
* Safety for Lifting Devices
* Powered Industrial Truck Safety
* Confined Spaces
* Environmental Safety Hazards
* Arc Flash Safety
* Fall Protection
* Machine Guarding
* Low Voltage Safety
* CDC Workplace Infection Safety and Prevention

**LEADERSHIP SKILLS**

* Essentials of Leadership
* Essentials of Communication
* Managing Performance: Best Practices
* Managing Performance: Corrective Actions
* Managing the Diverse Workplace
* Intro to Managerial Accounting
* Conflict Resolution Principles
* Conflict Resolution for Different Groups
* Team Leadership
* Manufacturing Management

**LEAN TRAINING**

* Lean Manufacturing Overview
* Continuous Process Improvement: Managing Flow
* Continuous Process Improvement: Identifying and Eliminating Waste
* Developing a Lean Culture
* Total Productive Maintenance
* 5S Overview
* Cell Design and Pull Systems
* Intro to Six Sigma
* Troubleshooting
* Conducting Kaizen Events
* SPC Overview
* Metrics for Lean
* Process Flow Charting
* Strategies for Setup Reduction
* Total Quality Management Overview
* Management Tools: Problem Solving
* Management Tools: Product and Process Design
* Value Stream Mapping: The Current State
* Six Sigma Goals and Tools
* Value Stream Mapping: The Future State
* Maintaining a Consistent Lean Culture
* Transforming Lean into Business Results
* Measuring Lean Systems
* Lean Fundamentals: Firm Grasp on Waste and Getting 5S Right
* Kaizen Workshop
* Value Stream Mapping: Diagram the Information and Material Flows in Your Business

**Machining**

* Basic Measurement
* Basics of Tolerance
* Blueprint Reading
* Calibration Fundamentals
* Hole Standards and Inspection
* Thread Standards and Inspection
* 5S Overview
* Lean Manufacturing Overview
* Essentials of Heat Treatment of Steel Ferrous Metals
* Introduction to Mechanical Properties
* Band Saw Operation
* Basic Cutting Theory
* Cutting Processes
* Introduction to Metal Cutting
* Fluids Metal Cutting
* Fluid Safety
* Overview of Machine Tools
* ISO 9001 Review
* Bloodborne Pathogens
* Fire Safety and Prevention
* Hand and Power Tool Safety
* Intro to OSHA
* Lockout/Tagout Procedures
* Noise Reduction and Hearing Conservation
* Personal Protective Equipment
* Powered Industrial Truck Safety
* Safety for Lifting Devices
* SDS and Hazard Communication
* Walking and Working Surfaces
* Geometry: Circles and Polygons
* Geometry: Lines and Angles
* Geometry: Triangles
* Math Fundamentals
* Math: Fractions and Decimals
* Trigonometry: Sine, Cosine, Tangent
* Units of Measurement
* Basic Grinding Theory
* Basics of the Centerless Grinder
* Basics of the Cylindrical Grinder
* Basics of the Surface Grinder
* Centerless Grinder Operation
* Cylindrical Grinder Operation
* Dressing and Truing
* Grinding Ferrous Metals
* Grinding Nonferrous Metals
* Grinding Processes
* Grinding Safety
* Grinding Variables
* Grinding Wheel Geometry
* Grinding Wheel Materials
* Introduction to Grinding Fluids
* Setup for the Centerless Grinder
* Setup for the Cylindrical Grinder
* Setup for the Surface Grinder
* Surface Grinder Operation
* Basics of G Code Programming
* Introduction to CNC Machines
* Introduction to Fastener Threads
* Introduction to GD&T
* Major Rules of GD&T
* Surface Texture and Inspection
* Metrics for Lean
* Process Flow Charting
* SPC Overview
* Strategies for Setup Reduction
* Troubleshooting
* Essentials of Communication
* Essentials of Leadership
* Chucks, Collets, and Vises
* Clamping Basics
* Locating Devices
* Supporting and Locating Principles
* Basics of G Code Programming
* Basics of the CNC Lathe
* Basics of the CNC Mill
* Control Panel Functions for the CNC Lathe
* Control Panel Functions for the CNC Mill
* Coordinates for the CNC Lathe
* Coordinates for the CNC Mill
* Introduction to CNC Machines
* Offsets on the CNC Lathe
* Offsets on the CNC Mill
* Introduction to Fastener Threads
* Surface Texture and Inspection
* SPC Overview
* Benchwork and Layout Operations
* Engine Lathe Basics
* Engine Lathe Operation
* Engine Lathe Setup
* Holemaking on the Manual Mill
* Manual Mill Basics
* Manual Mill Operation
* Manual Mill Setup
* Classification of Steel
* Intro to EDM Safety for Metal Cutting
* Machine Guarding Chucks, Collets, and Vises
* Clamping Basics
* Locating Devices
* Supporting and Locating Principles
* Calculations for Programming the Lathe
* Calculations for Programming the Mill
* Canned Cycles for the Lathe
* Canned Cycles for the Mill
* Creating a CNC Milling Program
* Creating a CNC Turning Program
* Introduction to CAD and CAM for Machining
* In-Line Inspection Applications
* Introduction to GD&T
* Major Rules of GD&T
* Intro to Six Sigma
* Metrics for Lean
* Introduction to Metals
* Speed and Feed for the Lathe
* Speed and Feed for the Mill
* Quality and Customer Service
* Automated Systems and Control Robot Axes
* Calculations for Programming the Lathe
* Calculations for Programming the Mill
* Canned Cycles for the Lathe
* Canned Cycles for the Mill
* Creating a CNC Milling Program
* Creating a CNC Turning Program
* Introduction to GD&T
* Major Rules of GD&T
* Metrics for Lean Process Flow
* Charting Strategies for Setup Reduction
* Troubleshooting
* Taper Turning on the Engine
* Lathe Threading on the Engine Lathe
* ANSI Insert Selection
* Basic Cutting Theory
* Carbide Grade Selection
* Cutting Tool Materials
* Drill Tool Geometry
* Impact of Workpiece Materials
* Lathe Tool Geometry
* Mill Tool Geometry
* Optimizing Tool Life and Process
* Speed and Feed for the Lathe
* Speed and Feed for the Mill
* Essentials of Communication
* Essentials of Leadership
* Basic Grinding Theory
* Basics of the Cylindrical Grinder
* Basics of the Surface Grinder
* Cylindrical Grinder Operation
* Dressing and Truing
* Grinding Ferrous Metals
* Grinding Nonferrous Materials
* Grinding Processes
* Grinding Safety
* Grinding Variables
* Grinding Wheel Geometry
* Grinding Wheel Materials
* Introduction to Grinding Fluids
* Setup for the Cylindrical Grinder
* Setup for the Surface Grinder
* Surface Grinder Operation
* Die Cutting Variables
* Material Tests for Welding

**MAINTENANCE**

* Math Fundamentals
* Math: Fractions and Decimals
* Units of Measurement
* Basics of Tolerance
* Blueprint Reading
* Basic Measurement
* Calibration Fundamentals
* Hole Standards and Inspection
* Thread Standards and Inspection
* Intro to OSHA
* Personal Protective Equipment
* Noise Reduction and Hearing Conservation
* Prespiratory Safety
* Lockout/Tagout Procedures
* SDS and Hazard Communication
* Bloodborne Pathogens
* Walking and Working Surfaces
* Fire Safety and Prevention
* Flammable/Combustible Liquids
* Hand and Power Tool Safety
* Safety for Lifting Devices
* Powered Industrial Truck Safety
* Confined Spaces
* Introduction to Physical Properties
* Introduction to Mechanical Properties
* Introduction to Metals
* Ferrous Metals
* Lean Manufacturing Overview
* ISO 9001:2015 Review
* Approaches to Maintenance
* Total Productive Maintenance
* 5S Overview
* Electrical Units
* Safety for Electrical Work
* Introduction to Mechanical Systems
* Safety for Mechanical Work
* Forces of Machines
* Algebra Fundamentals
* Geometry: Lines and Angles
* Geometry: Triangles
* Geometry: Circles and Polygons
* Trigonometry: The Pythagorean Theorem
* Trigonometry: Sine, Cosine, Tangent
* Essentials of Heat
* Treatment of Steel
* Troubleshooting
* Introduction to CNC Machines
* Control Panel Functions for the CNC Lathe
* Control Panel Functions for the CNC Mill
* Shift Registers
* Introduction to Circuits
* Introduction to Magnetism
* DC Circuit Components
* NEC Overview
* AC Fundamentals
* Electrical Instruments
* Electrical Print Reading
* Conductor Selection
* Series Circuit Calculations
* Parallel Circuit Calculations
* Limit Switches and Proximity Sensors
* Lubricant Fundamentals
* Overview of Soldering
* Relays, Contractors, and Motor Starters
* Control Devices
* Distribution Systems
* Introduction to Electric Motors
* Logic and Line Diagrams
* Essentials of Leadership
* Essentials of Communication
* Algebra Fundamentals
* Geometry: Lines and Angles
* Geometry: Triangles
* Geometry: Circles and Polygons
* Trigonometry: The Pythagorean Theorem
* Trigonometry: Sine, Cosine, Tangent
* Essentials of Heat
* Treatment of Steel
* Nonferrous Metals
* Troubleshooting
* Series Circuit Calculations
* Parallel Circuit Calculations
* Battery Selection
* Bearing Applications
* Spring Applications
* Belt Drive Applications
* Gear Applications
* Reversing Motor Circuits
* Specs for Servomotors
* Reduced Voltage Starting
* The Forces of Fluid Power
* Safety for Hydraulics and Pneumatics
* Introduction to Hyudraulic Components
* Introduction to Pneumatic Components
* Introduction to Fluid Conductors
* Fittings for Fluid Systems
* Preventative Maintenance for Fluid Systems
* Lubricant Fundamentals
* Mechanical Power Variables
* Clutch and Brake Applications
* Intro to Machine Rigging
* Rigging Equipment
* Rigging Inspection and Safety
* Rigging Mechanics
* Intro to Fastener Threads
* Overview of Threaded Fasteners
* Tools for Threaded Fasteners
* Overview of Non-Threaded Fasteners
* Understanding Torque
* Threaded Fastener Selection
* Distribution Systems
* Introduction to Electric Motors
* Symbols and Diagrams for Motors
* Logic and Line Diagrams
* DC Motor Applications
* Solenoids
* AC Motor Applications
* Essentials of Leadership
* Essentials of Communication
* Bearing Applications
* Spring Applications
* Belt Drive Applications
* Gear Applications
* Introduction to PLCs
* Hardware for PLCs
* Basics of Ladder Logic
* Numbering Systems and Codes
* PLC Inputs and Outputs
* Basic Programming
* PLC Timers and Counters
* Networking for PLCs
* Hand-Held Programmers for PLCs
* Overview of PLC Registers
* PLC Program Control Instructions
* Sequencer Instructions for PLCs
* PLC Installation Practices
* PID for PLCs
* Data Manipulation
* Robot Components
* End Effectors
* Robot Axes
* Robot Sensors
* Robot Maintenance
* Robot Installations
* Vision Systems
* Industrial Network Integration
* The Forces of Fluid Power
* Safety for Hydraulics and Pneumatics
* Introduction to Hydraulic Components
* Introduction to Pneumatic Components
* Introduction to Fluid Conductors
* Fittings for Fluid Systems
* Mechanical Power Variables
* Clutch and Brake Applications
* Intro to Machine Rigging
* Rigging Equipment
* Rigging Inspection and Safety
* Rigging Mechanics
* Robot Safety
* Robot Troubleshooting
* Concepts of Robot Programming
* Intro to Fastener Threads
* Overview of Threaded Fasteners
* Tools for Threaded Fasteners
* Overview of Non-Threaded Fasteners
* Understanding Torque
* Threaded Fastener Selection
* Nonferrous Metals
* Battery Selection
* Bearing Applications
* Spring Applications
* Belt Drive Applications
* Gear Applications
* Reversing Motor Circuits
* Specs for Servomotors
* Reduced Voltage Starting
* The Forces of Fluid Power
* Safety for Hydraulics and Pneumatics
* Introduction to Hydraulic Components
* Introduction to Pneumatic Components
* Introduction to Fluid Conductors
* Fittings for Fluid Systems
* Mechanical Power Variables
* Clutch and Brake Applications
* Intro to Machine Rigging
* Rigging Equipment
* Rigging Inspection and Safety
* Rigging Mechanics
* Intro to Fastener Threads
* Overview of Threaded Fasteners
* Tools for Threaded Fasteners
* Overview of Non-Threaded Fasteners
* Understanding Torque
* Threaded Fastener Selection
* Distribution Systems
* Symbols and Diagrams for Motors
* DC Motor Applications
* Solenoids AC Motor Applications
* Benchwork and Layout Operations
* Introduction to CNC Machines
* Control Panel Functions for the CNC Lathe
* Control Panel Functions for the CNC Mill
* Introduction to Circuits
* Introduction to Magnetism
* DC Circuit Components
* NEC Overview
* AC Fundamentals
* Electrical Instruments
* Electrical Print Reading
* DC Power Sources
* AC Power Sources
* Conductor Selection
* Limit Switches and Proximity Sensors
* Hydraulic Power Variables
* Hydraulic Power Sources
* Pneumatic Power Variables
* Pneumatic Power Sources
* Hydraulic Control Valves
* Hydraulic Schematics and Basic Circuit Design
* Pneumatic Control Valves
* Pneumatic Schematics and Circuit Design
* Actuator Applications
* Hydraulic Fluid Selection
* Contamination and Filter Selection
* Hydraulic Principles and System Design
* Welding Safety
* Essentials PPE for Welding
* Welding Fumes and Gases Safety
* Electrical Safety for Welding
* Introduction to Welding
* Introduction to Welding Processes
* Overview of Soldering
* Plasma Cutting
* SMAW Applications
* GMAW Applications
* What Is Oxyfuel Welding?
* Oxyfuel Welding Applications
* Relays, Contactors, and Motor Starters
* Control Devices
* Distribution Systems

**PLASTICS PROCESSING**

* Basic Measurement
* Basics of Tolerance
* Blueprint Reading
* Calibration Fundamentals
* Hole Standards and Inspection
* Thread Standards and Inspection
* 5S Overview
* Lean Manufacturing Overview
* Introduction to Mechanical Properties
* Introduction to Plastics
* ISO 9001 Review
* Bloodborne Pathogens
* Fire Safety and Prevention
* Hand and Power Tool Safety
* Intro to OSHA
* Lockout/Tagout Procedures
* Noise Reduction and Hearing Conservation
* Personal Protective Equipment
* Powered Industrial Truck Safety
* Safety for Lifting Devices
* SDS and Hazard Communication
* Walking and Working Surfaces
* Geometry: Circles and Polygons
* Geometry: Lines and Angles
* Geometry: Triangles
* Math Fundamentals
* Math: Fractions and Decimals
* Trigonometry: Sine, Cosine, Tangent
* Units of Measurement
* Advanced Thermoset Resins for Composites
* Composite Inspection and Defect Prevention
* Intro to Compression Molding
* Electrical Units
* Safety for Electrical Work
* Fittings for Fluid Systems
* Introduction to Fluid Conductors
* Introduction to Hydraulic Components
* Introduction to Pneumatic Components
* Preventive Maintenance for Fluid Systems
* Safety for Hydraulics and Pneumatics
* The Forces of Fluid Power
* Thermoplastics Thermosets Forces of Machines
* Introduction to Mechanical Systems
* Safety for Mechanical Work
* Intro to Machine Rigging
* Rigging Equipment
* Rigging Inspection and Safety
* Rigging Mechanics
* Basics of the Cylindrical Grinder
* Basics of the Surface Grinder
* Cylindrical Grinder Operation
* Dressing and Truing
* Grinding Processes
* Grinding Safety
* Grinding Variables Grinding Wheel Geometry
* Grinding Wheel Materials
* Grinding Wheel Selection
* Introduction to Grinding Fluids
* Setup for the Cylindrical Grinder
* Setup for the Surface Grinder
* Surface Grinder Operation
* Calculations for Programming the Mill
* Canned Cycles for the Mill
* Creating a CNC Milling Program
* Introduction to GD&T
* Major Rules of GD&T
* Troubleshooting
* Basic Cutting Theory
* Carbide Grade Selection
* Cutting Tool Materials
* Speed and Feed for the Lathe
* Speed and Feed for the Mill

**QUALITY**

* Advanced Hole Inspection
* Basic Measurement
* Basics of Tolerance
* Blueprint Reading
* Calibration and Documentation
* Calibration Fundamentals
* Hole Standards and Inspection
* In-Line Inspection Applications
* Inspecting a Cylindrical Part
* Inspecting a Prismatic Part
* Inspecting with CMMs
* Inspecting with Optical Comparators
* Introduction to GD&T
* Major Rules of GD&T
* Surface Texture and Inspection
* Thread Standards and Inspection
* 5S Overview
* Lean Manufacturing Overview
* SPC Overview
* Essentials of Heat Treatment of Steel
* Ferrous Metals
* Hardness Testing
* Introduction to Mechanical Properties
* Band Saw Operation
* Basic Cutting Theory
* Cutting Processes
* Introduction to Metal Cutting Fluids
* Metal Cutting Fluid Safety
* Overview of Machine Tools
* ISO 9001 Review
* Bloodborne Pathogens
* Fire Safety and Prevention
* Hand and Power Tool Safety
* Intro to OSHA
* Lockout/Tagout Procedures
* Noise Reduction and Hearing Conservation
* Personal Protective Equipment
* Powered Industrial Truck Safety Safety for Lifting Devices
* SDS and Hazard Communication
* Walking and Working Surfaces
* Geometry: Circles and Polygons
* Geometry: Lines and Angles
* Geometry: Triangles
* Math Fundamentals
* Math: Fractions and Decimals
* Trigonometry: Sine, Cosine, Tangent
* Units of Measurement

**WELDING**

* 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
* 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
* AC Fundamentals
* AC Power Sources
* Battery Selection
* Conductor Selection
* DC Circuit Components
* DC Power Sources
* Electrical Instruments
* Electrical Print Reading
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* 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
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* Introduction to Welding Processes
* Material Tests for Welding
* Overview of Weld Types
* Welding Ferrous Metals
* Welding Nonferrous Metals
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* AC Power Sources
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* 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
* 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