

Systems

- Autonomous, Connected, Electric, and Shared (ACES) Vehicle Fundamentals
- Braking Systems: Hydraulic
- Braking Systems: Pneumatic
- Differential Basics
- Drive Axles: Heavy Duty Commercial Vehicles
- Electric Vehicle Battery Basics
- Engine Fundamentals: Internal Combustion
- Engine Testing Methods and Systems: Internal Combustion
- Heating, Ventilation, and Air Conditioning (HVAC) Basics
- Lithium-Ion Battery Manufacturing
- Lithium-Ion Battery Materials
- Traction Motors for Electric Vehicles
- Transfer Case Principles
- Transmission Fundamentals: Automatic

Manufactured Products

Bearings

- Bearing Fundamentals

Belts

- Belt Classifications: Poly V Belts
- Belt Classifications: Round & Flat Belts
- Belt Classifications: Special Belts
- Belt Classifications: Synchronous Belts
- Belt Classifications: V Belts

Chain

- Chain Fundamentals: Industrial

Compressors

- Compressor Fundamentals: Positive Displacement
- Compressors: Ancillary Equipment

Electrical and Electronics

- Electric Motor Fundamentals
- Electrical Power Introduction
- Electronic Terminology
- Embedded System Basics

Fasteners

- Bolted Joint Basics
- Threaded Fastener Specifications
- Threaded Fastener Terminology and Components
- Threaded Fastener Testing and Defects

Gearboxes

- Gearbox Basics

Gears

- Bevel and Hypoid Gear Terminology
- Cylindrical Gear Manufacturing Troubleshooting
- Gear Chart Interpretation-Elemental Measurements on Cylindrical Gears
- Gear Fundamentals
- Spur and Helical Gear Terminology

Hydraulics

- Hydraulic System Fundamentals

Oil Seals

- Oil Seal Fundamentals: Rotary Applications

Product Design

- Product Noise Vibration, and Harshness (NVH) Troubleshooting
- Spur and Helical Gear Design Fundamentals

Tires

- Pneumatic Tires: Tire Defects
- Pneumatic Tires: Tire Labels and Markings
- Pneumatic Tires: Tire Terminology

Valves

- Valve Basics

Wheels

- Wheel Basics

Sales

- Understand Customer Personality Styles to Help You Sell More Effectively

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Manufacturing Processes

Additive Manufacturing

- Additive Manufacturing Stereolithography

Castings

- Aluminum Melting Fundamentals
- Bonded Sand Aluminum Casting Basics
- Bonded Sand Fundamentals
- Bonded Sand Iron Casting Basics
- Bonded Sand: Horizontally Parted Molds
- Bonded Sand: Mold Patterns
- Bonded Sand: Vertically Parted Molds
- Charge Calculation for Cast Irons
- Chemically Bonded Sand Basics
- Cupola Furnace Fundamentals
- Cupola Furnace Operations
- Cupola Furnace Troubleshooting and Techniques
- Foundry Cleaning Room Equipment
- Gating and Riser Basics
- Gravity Die Casting Basics
- Green Sand Defect Analysis
- Green Sand Equipment and Process Control
- Green Sand Properties
- Green Sand Testing
- High Pressure Die Casting Basics
- Investment Casting Basics
- Iron Melting Fundamentals
- Low Pressure Die Casting Basics
- Quality Inspection for Steel Castings
- Vacuum Process Fundamentals

Heat Treating

- Heat Treating Basics (*available in Spanish*)
- Heat Treating Processes and Equipment
- Heat Treating Safety
- Heat Treating Testing and Defects

Injection Molding

- Injection Molding Process
- Injection Molding Terminology
- Injection Molding Troubleshooting

Metal Cutting

- Cylindrical Grinding Fundamentals
- Cylindrical Grinding Process Strategy
- Fixturing Fundamentals for Machining
- Hole Process Fundamentals
- Machine Tool Fundamentals
- Surface Process Fundamentals
- Turning Tool and Process Basics

Metal Forming

- Cold Forming Fundamentals
- Corrective Leveling Basics
- Forging Basics
- Forgings: Closed Die Processes
- Forgings: Closed Die Terminology and Equipment
- Metal Forming Process Selection
- Roll Forming Basics
- Stamping Processes
- Stamping Terminology

Plating

- Plating Fundamentals

Welding

- Welding Fundamentals

Materials

- Aluminum Fundamentals: Castings
- Composite Basics
- Destructive Metallurgical Testing
- Ductile Iron Fundamentals
- Gray Iron Fundamentals
- Non-Destructive Testing
- Polymer Basics
- Polymer Fundamentals
- Powder Metallurgy Basics
- Steel Basics
- Steel Fundamentals
- Steel Tubing Basics

Manufacturing Fundamentals

Engineering Drawings

- Engineering Drawings Fundamentals
- Engineering Drawings for Castings
- Engineering Drawings for Forgings
- Engineering Drawings for Hydraulics
- Engineering Drawings for Machining
- Engineering Drawings for Spur and Helical Gears
- GD&T Fundamentals

Manufacturing Excellence

- 5S Workplace Organization Method
- Contingency Planning Fundamentals
- Purchase Order Fundamentals
- Value Analysis and Value Engineering (VAVE)

Quality

- 7QC Tools: Check Sheets
- 7QC Tools: Control Charts
- 7QC Tools: Fishbone Diagrams
- 7QC Tools: Histograms
- 7QC Tools: Pareto Charts
- 7QC Tools: Scatter Diagrams
- 7QC Tools: Stratification
- 8D Problem-Solving Basics
- Advanced Product Quality Planning (APQP)
- Affinity Diagrams
- Control Plan
- Coordinate Measuring Machine (CMM) Basics
- Measurements: Basic Concepts
- Measurements: Measurement Math
- Measurements: Measuring Processes
- Measurements: Measuring Tools
- Process Failure Mode and Effects Analysis (PFMEA)
- Production Part Approval Process (PPAP)
- Process Flow Diagrams
- Shop Math: Fractions
- Statistical Process Control (SPC) Basics

Industrial Safety

- Personal Protective Equipment (PPE) Selection
- PPE Scenarios for Forge Shops
- Precision Grinding: Abrasive Wheel Safety
- Safety: Lockout Tagout (LOTO)

Industry 4.0

- Automation Basics
- Internet of Things: Manufacturing
- Sensors: Measurement Concepts
- Robotics Fundamentals

Machining Video Series Course List

Machining

- Gear Hobbing Video Series 1
- Gear Hobbing Video Series 2
- Honing Video Series 1
- Honing Video Series 2
- Horizontal Machining Center (HMC) Video Series 1
- Horizontal Machining Center (HMC) Video Series 2
- Rotary Surface Grinding Video Series 1
- Rotary Surface Grinding Video Series 2
- Turning Center Video Series 1
- Turning Center Video Series 2
- Turning Center Video Series 3
- Vertical Machining Center (VMC) Video Series 1
- Vertical Machining Center (VMC) Video Series 2

Unique Benefits of our Video Series Courses

- + The lessons are comprised of 100% fully narrated, short, and engaging animated videos.
- + The learner has the option to first be assessed on what they know and do not know.
- + The learner is reassessed on their learning until the desired knowledge level is achieved.