THORS eLearning Solutions

THORS Academy Course Library

Engineering Drawings

- Engineering Drawings Fundamentals
- Engineering Drawings for Castings
- Engineering Drawings for Electrical Circuits
- Engineering Drawings for Forgings
- Engineering Drawings for Hydraulics
- Engineering Drawings for Machining
- Engineering Drawings for Spur and Helical Gears
- Engineering Drawings for Welding
- Engineering Drawings for Wiring Harnesses
- GD&T Fundamentals

Quality

- 7QC Tools: Check Sheets *(available in Tamil)*
- 7QC Tools: Control Charts
- 7QC Tools: Fishbone Diagrams *(available in Tamil)*
- 7QC Tools: Histograms *(available in Tamil)*
- 7QC Tools: Pareto Charts *(available in Tamil)*
- 7QC Tools: Scatter Diagrams
- 7QC Tools: Stratification
- 8D Problem-Solving Basics
- Advanced Product Quality Planning (APQP)
- Affinity Diagrams
- Calibration of Measuring Tools
- Control Plan
- Coordinate Measuring Machine (CMM) Basics
- GD&T Measurement Basics
- Measurements System Analysis (MSA)
- Measurements: Basic Concepts
- Measurements: Measurement Math
- Measurements: Measuring Processes
- Measurements: Measuring Tools
- Process Failure Mode and Effects Analysis (PFMEA)
- Process Failure Mode and Effects Analysis (PFMEA) AIAG & VDA
- Production Part Approval Process (PPAP)
- Process Flow Diagrams
- Shop Math: Fractions
- Statistical Process Control (SPC) Basics
- Statistical Process Control (SPC) Fundamentals
- Statistics Basics
- Surface Finish Measurement Basics

Industry 4.0

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

Manufacturing Excellence

- 5S Workplace Organization Method
- Contingency Planning Fundamentals
- Costing Machined Components
- Cycle Time
- Inventory Management Essentials
- Kaizen
- Lead Time
- Overall Equipment Effectiveness (OEE)
- Purchase Order Fundamentals
- Takt Time
- Understanding Incoterms® Rules
- Value Analysis and Value Engineering (VAVE)

Safety and Compliance

- Personal Protective Equipment (PPE) Selection
- Prevention Of Sexual Harassment (POSH) in the Workplace
- Safety: Lockout Tagout (LOTO)

This category includes an additional 600+ courses in Safety and Workplace Compliance. Contact us to learn more.

Materials

- Aluminum Fundamentals: Castings
- Ceramic Basics
- Composite Basics
- Composite Manufacturing
- 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
- Steel Tubing Production
- Wrought Aluminum Basics

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 Risering 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
- Induction Melting Furnace I
- Investment Casting Basics
- Iron Melting Fundamentals
- Low Pressure Die Casting Basics
- Quality Inspection for Steel Castings
- Shakeout Basics
- Vacuum Process Fundamentals

Heat Treating

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

Injection Molding

- Injection Molding Design Fundamentals
- Injection Molding Process
- Injection Molding Terminology
- Injection Molding Troubleshooting





Manufacturing Processes (cont'd)

Machining Video Series
- Broaching Video Series
- Cylindrical Grinding Video Series 1
- 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
- Horizontal Machine Center (HMC) Machine Safety
- 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

Metal Cutting
- Centerless Grinding I
- Centerless Grinding II
- Cylindrical Grinding Fundamentals
- Cylindrical Grinding Process Parameters
- Cylindrical Grinding Process Strategy
- Fixturing Fundamentals for Machining
- Hole Process Fundamentals
- Industrial Band Saw Blade Operation
- Machine Tool Fundamentals
- Precision Grinding: Abrasive Wheel Safety
- Surface Process Fundamentals
- Turning Tool and Process Basics
- Waterjet Cutting

Metal Forming
- Aluminum Rolling Basics
- Cold Forming Fundamentals
- Corrective Leveling Basics
- Fine Blanking Fundamentals
- Forging Basics
- Forgings: Closed Die Processes
- Forgings: Closed Die Terminology and Equipment
- Forgings: PPE Scenarios for Forge Shops
- Metal Forming Process Selection
- Roll Forming Basics
- Stamping Processes
- Stamping Terminology
- Thread Rolling Fundamentals

Painting
- Cathodic Electrodeposition (CED) Painting Basics
- Powder Coating Fundamentals

Plating
- Plating Fundamentals

Welding
- Welding Fundamentals





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
- Sprocket Basics

Compressors
- Compressor Fundamentals: Positive Displacement
- Compressors: Ancillary Equipment

Electrical and Electronics
- Active Electronic Circuit Basics
- Electrical Measurement Fundamentals
- Electric Motor Fundamentals
- Electrical Power Introduction
- Electronic Terminology
- Electrostatic Discharge (ESD) Basics
- Embedded System Basics
- Embedded Systems Programming
- Light Emitting Diode (LED) Basics
- Light Emitting Diode (LED) Failure Modes
- Passive Electronic Circuit Basics
- Printed Circuit Board Assembly (PCBA)
- Printed Circuit Board (PCB) Basics
- Printed Circuit Board (PCB) Manufacturing
- Programmable Logic Controller (PLC) Basics
- Programmable Logic Controller (PLC) Installation and Troubleshooting
- Programmable Logic Controller (PLC) Programming
- Semiconductor Basics
- Semiconductor Manufacturing I
- Semiconductor Manufacturing II
- Semiconductor Manufacturing III
- Semiconductor Metrology Basics
- Semiconductor Metrology Instruments
- Solenoid Basics
- Variable Frequency Drive (VFD) Basics
- Wiring Harness Components
- Wiring Harness Integration
- Wiring Harness Wire Processing

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

Gearboxes
- Gearbox Basics

Manufactured Products (cont'd)

Gears
- Bevel and Hypoid Gear Terminology
- Cylindrical Gear Manufacturing Troubleshooting
- Gear Chart Interpretation: Composite Measurements on Bevel Gears
- Gear Chart Interpretation: Elemental Measurements on Bevel Gears
- Gear Chart Interpretation-Elemental Measurements on Cylindrical Gears
- Gear Fundamentals
- Generating Gear Grinding I
- Generating Gear Grinding II
- Spur and Helical Gear Terminology

Hydraulics
- Hydraulic System Fundamentals

Seals
- Oil Seal Fundamentals: Rotary Applications
- Seal Basics

Product Design
- Aluminum Casting Design Essentials
- Forging Die Design Essentials
- 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
- Engine Valve Manufacturing
- Valve Basics

Wheels
- Wheel Basics

Automotive Systems

- Advanced Driver Assistance Systems (ADAS) Fundamentals
- Autonomous, Connected, Electric, and Shared (ACES) Vehicle Fundamentals
- Braking Systems: Hydraulic
- Braking Systems: Pneumatic
- Chassis System Basics
- Differential Basics
- Drive Axles: Heavy Duty Commercial Vehicles
- Electric Vehicle Battery Basics
- Engine Fundamentals: Internal Combustion
- Engine Testing Methods and Systems: Internal Combustion
- Exhaust Gas Recirculation (EGR) System Basics
- Filtration Systems for Transportation and Industrial Applications
- Heating, Ventilation, and Air Conditioning (HVAC) Basics
- Hydrogen Powered Internal Combustion Engine (HPICE) Basics
- Lithium-Ion Battery Charging
- Lithium-Ion Battery Manufacturing
- Lithium-Ion Battery Materials
- Lithium-Ion Battery Safety
- Lithium-Ion Battery Testing
- Steering System Basics
- Suspension System Basics
- Traction Motor Stator Assembly Process
- Traction Motors for Electric Vehicles
- Transfer Case Principles
- Transmission Fundamentals: Automatic
- Turbocharger Basics

The digital version of this course library list links to the course page on our website that includes the course learning objectives, additional course details, and a course preview video.

The THORS Academy Course Library is constantly growing with 2-3 new titles being added each month. Please use the QR code below to view our most up-to-date course list.