

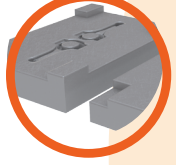
# On-Demand Courses for the Aluminum Casting Industry

THORS Academy courses reflect industry processes from start to finish. Every step of the way, **Think THORS™** for solutions that accelerate learning and improve effectiveness.



## RAW MATERIALS

Steel Basics  
Steel Fundamentals



## PATTERN AND DIE TOOLING

Gating and Riser Basics  
Lightning Learning: Vertical Machining Center Series 1 and 2  
Lightning Learning: Horizontal Machining Center Series 1 and 2



## RAW MATERIALS

Aluminum Casting Fundamentals  
Destructive Metallurgical Testing  
Non-Destructive Testing



## MELTING PROCESS

Aluminum Melting Fundamentals  
Cupola Furnace Fundamentals  
Cupola Furnace Operations  
Cupola Furnace Troubleshooting and Techniques



## MOLDING

Bonded Sand Horizontally Parted Molds  
Bonded Sand Mold Patterns  
Bonded Sand Vertically Parted Molds  
Green Sand Defects  
Green Sand Equipment and Process  
Green Sand Properties  
Green Sand System Testing  
Gravity Die Casting Basics  
High Pressure Die Casting Basics  
Low Pressure Die Casting Basics  
Investment Casting Basics  
Vacuum Process Fundamentals

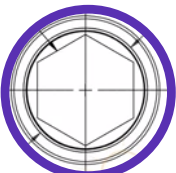


## CLEANING/FINISHING AND MACHINING

Foundry Cleaning Room Equipment  
Abrasive Grinding Wheel Safety  
Fixturing Fundamentals for Machining  
Hole Process Fundamentals  
Machine Tool Fundamentals  
Surface Process Fundamentals  
Turning Tool and Process Basics  
Lightning Learning: Turning Center Series 1 and 2  
Lightning Learning: Vertical Machining Center Series 1 and 2  
Lightning Learning: Horizontal Machining Center Series 1 and 2

**Our solution creates value for the following functions:**

Design Engineering	Purchasing
Manufacturing Engineering	Quality
Manufacturing Operations	Sales



## QUALITY ASSURANCE

Engineering Drawings Fundamentals  
Engineering Drawings for Castings  
Engineering Drawings for Machining  
GD & T Fundamentals  
Measurements: Basic Concepts  
Measurements: Measurement Math  
Measurements: Measuring Processes  
Measurements: Measuring Tools  
Destructive Metallurgical Testing  
Non-Destructive Testing  
Production Part Approval Process (PPAP)  
Control Plan

Contingency Planning  
Process Flow Diagrams  
Affinity Diagrams  
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  
5S Workplace Organization Method  
Process Failure Mode and Effects Analysis (PFMEA)  
Value Analysis and Value Engineering (VAE)



## SAFETY

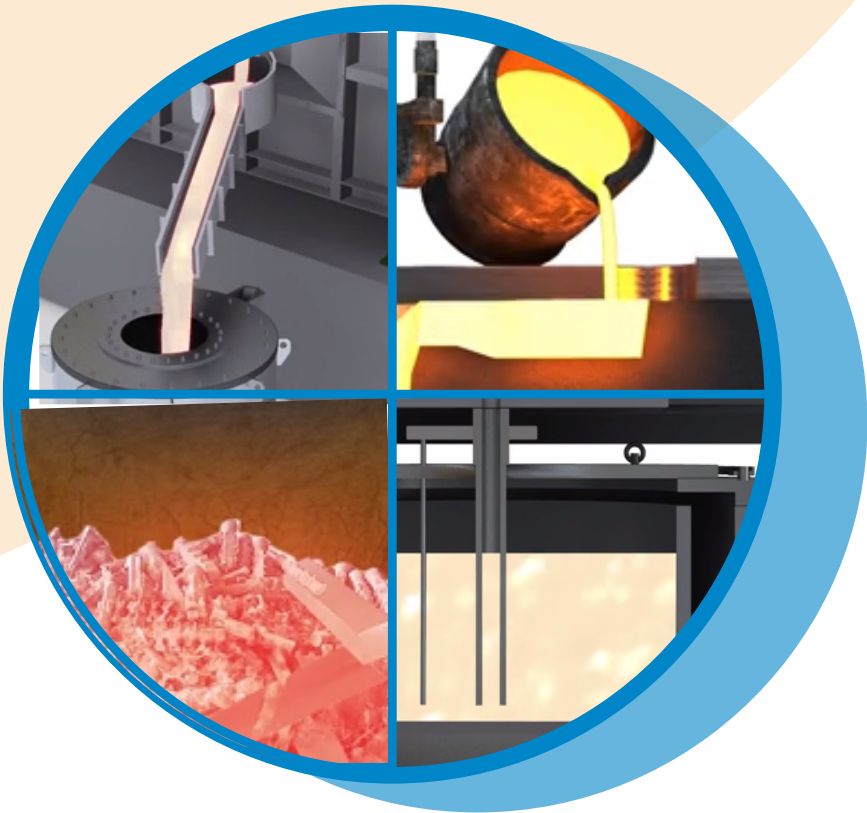
Personal Protective Equipment (PPE)  
Selection  
Lockout Tagout (LOTO)



## PLANT MAINTENANCE

Bolted Joint Basics  
Bearing Fundamentals  
Belt Classifications: Poly V Belts  
Belt Classifications: V Belts  
Chain Fundamentals: Industrial  
Compressors: Ancillary Equipment  
Compressor Fundamentals: Positive Displacement  
Electric Motor Fundamentals  
Valve Basics

Electrical Power Introduction  
Electronic Terminology  
Gearbox Basics  
Hydraulic System Fundamentals  
Threaded Fastener Testing and Defects  
Threaded Fastener Terminology and Components  
Robotic Fundamentals  
Internet of Things: Manufacturing  
Automation Basics  
Threaded Fastener Specifications  
Oil Seal Fundamentals: Rotary Applications



The THORS Academy Course Library is constantly growing with 2-3 new titles being added each month. Please use the QR code to view our most current list with links for details about each course.

To access the online THORS Course Library: Scan this QR Code  
To search for any word: Use CTRL + F (or Command + F on the Mac)  
To view more information about a course: Click on the Course Name