

MECHANICAL INSULATION

Length: 3 years
OJT: 6,000 hours

This program is competency based and designed to provide classroom instruction as well as work experience for apprentices in the mechanical insulation trade. Students will receive intense instruction in safety, math, insulation materials, installation, maintenance, and several other areas consistent with the mechanical insulation trade.

LEVEL I

- OSHA 10-Hour Safety
- Basic Safety
- Introduction to Construction Math
- Introduction to Hand Tools
- Introduction to Power Tools
- Introduction to Blueprint Reading
- Basic Rigging
- Orientation
- Trade Relations
- Tools of the Trade
- Material Handling, Storage, and Distribution
- Characteristics of Pipe Insulation
- Installing Fiberglass Pipe Insulation
- Installing Pipe Fitting, Valves, and Flanges

LEVEL II

- Installing Flexible Foam Insulation
- Installing Blanket Insulation for Ducts
- Installing Board Insulation for Ducts
- Installing Calcium Silicate/ Expanded Perlite Pipe Insulation
- Installing Mineral Wool Insulation
- Installing Rigid Foam Insulation
- Installing Board and Block Insulation
- Cement and Fabric Finishes & Mastics
- Plumbing Systems
- Chilled and Hot Water Heating Systems

LEVEL III

- Trade Math
- Air Duct Systems
- Theory of Heat Transfer and Moisture Effects
- Adhesives and Their Uses
- Steam, Condensate, and Process Water Systems
- Large Boilers, Breechings, Precipitators, and Apparatus
- Refrigeration and Cryogenic Systems
- Specialized Insulation Systems
- Blueprints and Specifications
- Jacketing Fabrication – Piping and Fittings
- Jacketing Fabrication – Vessels and Equipment
- Sheet Metal Lagging



Iowa Chapter