

Chillers

This three-day course introduces chillers used in air conditioning systems, including their components, function, operation, and maintenance.

I. Properties of Matter

- Molecular Theory
- States of Matter
- Heat Transfer

II. Gases

- Expansion
- Gas Laws
- Densities and Specific Volumes
- Gas Mixtures

III. Air Conditioning

- Definition
- Properties of Air
- Using the Psychometric Chart
- Measuring Air Movement

IV. Refrigerants

- Characteristics
- Types
- Properties
- Moisture Effects
- Oil Effects
- Leak Detection
- Performance
- Storage

V. Refrigerant Oils

- Classification
- Properties
- Specifications

VI. System Components

- Vapor Compression Cycle
- Compressors
- Condensers
- Evaporators
- Receiver
- Flow Controls

VII. Auxiliary Components

- Piping
- Separators
- Filters
- Mufflers
- Moisture Indicators
- Valves

VIII. Chiller Controls

- Types of Control Systems
- Automatic Controls
- Adjustments

IX. System Operation

- Normal Operation
- Abnormal Operation

X. Maintenance and Troubleshooting

- Troubleshooting Techniques
- Performance Evaluations
- Equipment Use