

CETPA INFOTECH PVT. LTD.

CURRICULUM FOR HVAC

❖ INTRODUCTION TO HVAC & REFRIGERATION

- Heating/ventilating & Air conditioning
- Fundamentals & basics of HVAC
- Window AC, Split AC, Centralized AC
- ASHRAE guidelines & its standards

❖ HVAC Functioning

- Basic Refrigeration Cycle
- Vapour Compression System
- Vapour Absorption System

❖ Basic Air Conditioning Components

- Compressor & Types of Compressor
- Condenser & Types of Condenser
- Evaporator & Types of Evaporator

❖ Centralised Air Conditioning & its Parts

- Water cooled chillers
- Air cooled chillers
- Cooling towers
- AHUs
- Pumps
- Humidifiers/ Dehumidifiers
- Air Washers
- Expansion

❖ HVAC Control

- AC Drives
- DOL Starter
- Star Delta Starter
- Variable Frequency Drives (VFDs)
- Sensor / Actuators / Thermo state / Thermocouple
- HVAC Control with BMS

❖ Indoor Air Quality

- Factor Affecting the air quality
- Controlling for air pollutants
- Ventilation

❖ Study on Psychometric Chart

- Psychometric Properties
- Dry bulb temperature
- Wet bulb temperature
- Relative humidity
- Dew Point temperature
- Specific humidity
- Absolute humidity
- Specific Enthalpy
- Pressure

❖ Building Heat & Cooling Load Calculation

- Calculation for Heat Loss / Heat Gain
- Sensible Heat Load
- Latent Heat Load

❖ HVAC Design Calculation

- Water Distribution System
- Calculation for chilled water & condenser water pipeline
- Air Distribution System
- Calculation for duct size

❖ Software's using in HVAC Designing

- Cooling & Heating load calculation using software
- Calculation & duct size using software's
- Calculation of pipe size (chilled water & Condenser water) using software's

❖ Introduction to Auto CAD

- Starting AutoCAD
- Drawing Area
- Command Window
- Status Bar
- Starting New Drawing
- Dynamic Input Mode
- Creating And Managing Workspace
- Coordinate Systems
- Drawing Lines & Circles
- Erasing Object
- Canceling & Undoing A Command
- Inputting Data
- Creating Basic Objects
- Using Object Snaps
- Using Polar Tracking And Polar Snap
- Using Object Snap Tracking
- Working With Units
- Trimming And Extending
- Objects To Defined Boundaries
- Creating Parallel And Offset Geometry
- Joining Objects
- Breaking An Object Into Two Objects

❖ Application of HVAC & Refrigeration

- Hospitals
- Commercial
- Residential
- Malls
- Food Preservation
- Cold Storage

❖ Industrial Visit Regarding HVAC System

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Because Knowledge Matters

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