

**Eligibility** : Degree/ Diploma in Mechanical/Production/Electrical Engg.

### **SYLLABUS -**

#### **Content for HVAC system**

- HVAC basics with general concept of HVAC.
- Various Indian and international codes for HVAC system design
- Classification of Air-Conditioning System.
- Heat load calculation & psychrometric chart reading
- Air distribution system & ducting system for commercial AC system
- Centralized air conditioning systems for commercial buildings
- Various chilled water system & their selection and working.
- Split/ WINDOW AC for residential and commercial HVAC .
- Latest technology VRF air conditioning and heat pump system
- Kitchen ventilation system basics & design.
- Exhaust and fresh air to maintain indoor air quality in the building.
- How to implement ECBC in HVAC system and for green building project
- Preparation of BOQ and DBR for HVAC project.
- Class room project work for commercial HVAC system design.

#### **Content for Electrical services ...**

- Basics of Electricity and how electricity is generated
- Various national and international codes for Electrical system
- Electrical formulas, definitions & rules
- Generation, Transmission & distribution of electricity.
- Various types of electricity generating power plants
- Electrical equipment and its application used in the installation
- Transformers & various installation practices.
- Diesel generator and various installation practices.
- Various type of protection devices and circuit breakers
- Importance of capacitors in power factor improvement along with harmonic control .
- Several types of cables and installation practices along with cable schedule preparation.
- Electrical motors and various application of electrical motors.
- Electrical installation in residential buildings & commercial buildings.
- Industrial electrical installation for process plants and engineering industry
- Various types of lighting and design of lighting for commercial as well as industrial projects.
- Emergency Diesel generator systems, UPS & inverters.
- Protection from lightning & various types of electrical earthing system.
- Electrical load calculations, transformer/ DG set sizing.
- Electrical requirement for hazardous locations.
- Preparation of power and lighting layout and electrical panel design.
- Preparation of BOQ and DBR for electrical design project.
- Class room project work for commercial building electrical system design.

#### **Plumbing Services content**

- Fundamentals of plumbing system & various codes.
- Water distribution system and its working
- Details for fixtures used in plumbing installation
- Water requirement for several types of buildings as per NBC
- Design of water distribution system for buildings.
- Plumbing fixtures for residential as well as commercial buildings.
- Water Demand & storage calculations.
- Water distribution through overhead tanks.
- Water distribution through underground system.

- Waste water sewage system and water recycling using STP
- Hot water system through electrical heating as well as solar hot water system
- various Environmental law regarding water pollution.
- Quality of drinking water & various water treatment system.
- Preparation of BOQ and DBR for plumbing project
- Classroom project work for commercial building plumbing system design.

## **Fire Alarm & protection system**

- Basics of Fire Alarm & Protection System.
- Applicable codes for Fire system design in INDIA.
- Various types of fire protection system & its design basics
- Sprinkler system design and piping calculation.
- Fire hydrant system design & water storage calculation for fire protection.
- Several types of Fire Alarm systems and their use.
- Smoke detector design, installation & maintenance.
- Fire alarm system cabling work and panel installation.
- Fire norms for new project construction.
- Design of fire Alarm & protection system for commercial buildings.
- Importance of Fire training in several types of buildings
- How to prevent fire at the work place.
- Preparation of BOQ and DBR for Fire system design project
- Classroom project work for commercial building Fire system design

## **BMS System**

- What is BMS System
- BMS System importance in MEP services.
- Working of the BMS System
- Operational Consideration & Maintenance.
- Energy Management through BMS system

## **Solar**

- Basic of solar PV power system
- Design and Installation of grid & off grid system
- Solar Power System component selection.
- Government initiatives in INDIA for solar power system.

**SITE VISIT WILL BE ARRANGED AT INDUSTRIAL PLANT.**

**Note: SIT reserves right to change the Training Content at any time as per the current job requirement.**

**After successful completion of Training Program, you will have opportunity to work in EPC sector as:**

MEP Design Engineer  
Inspection and Testing Engineer  
MEP consultant.

Construction Engineer  
Site Engineer  
Installation & Commissioning Engineer

MEP Project Engineer  
Erection Engineer  
Maintenance & Operation Engineer

***Together We Will Bring New Dimensions To Engineering Industry***

**Suvidya Institute of Technology Pvt. Ltd.**  
 18/140, Anand Nagar, Nehru Road, Vakola, Santacruz (East), Mumbai, Maharashtra - 400 055 NDIA  
 Phone: 9167219405, 9167219404, 09821569885, E-mail : [enquiry@suvidya.ac.in](mailto:enquiry@suvidya.ac.in),  
 Web Site: [www.suvidya.ac.in](http://www.suvidya.ac.in)

**(Branch: Pune) Suvidya Institute of Technology Pvt. Ltd.**  
 303, 3rd Floor, Success Square, Karve Road, Paschimanagri, Kothrud, Pune – 411038 Maharashtra, India.  
 Phone: 9082380387, 9326397978, E-mail : [enquiry@suvidya.ac.in](mailto:enquiry@suvidya.ac.in), Web Site: [www.suvidya.ac.in](http://www.suvidya.ac.in)