Certified HVAC Design Professional (CHDP) Workshop

Days: **4 Days** | Course Fee: **USD 1,500**

Course Description

The Certified HVAC Design Professional (CHDP) Training Program is a premier, industry-aligned certification course designed to equip professionals with the expertise to design efficient, compliant, and sustainable HVAC systems. From foundational principles (load calculation, psychrometrics) to advanced topics (Building Automation Systems [BAS] controls, green building standards etc), this program blends theoretical knowledge with practical application—preparing participants to lead HVAC design projects for commercial, institutional other facilities. Aligned with global standards (ASHRAE, GSAS,LEED), it is the definitive pathway to becoming a trusted HVAC design expert capable of delivering high-performance, energy-smart solutions.

What You Will Learn

By completing this program, you will learn:

1 Core Fundamentals

- Calculate heating and cooling loads for any building type using industry-standard methodologies and software.

- Interpret psychrometric charts to design effective air distribution and humidity control systems.

- Select optimal HVAC systems (air-based or hydronic) based on project requirements and efficiency goals

2 System Design & Engineering

- Design basic air systems, including ductwork layout, airflow balancing, and ventilation strategies

- Develop hydronic systems, such as piping networks, pump sizing, and heat transfer calculations.

- Evaluate and specify HVAC equipment (chillers, boilers, air handling units, Fan Coil Units, Fans, Pumps etc) for reliability and energy efficiency.

3 **Advanced Technologies & Compliance**

- Integrate Building Automation Systems (BAS) to optimize control, reduce energy use, and enhance occupant comfort.
- Apply green building standards (GSAS/LEED, HPB, NZEB) and adhere to ASHRAE guidelines (62.1, 55, 180) for ventilation, thermal comfort, and indoor air quality.

3 **Real-World Application**

- Solve complex design challenges through case studies of education facilities and multi-story office buildings.
- Translate theoretical knowledge into actionable plans—from concept to commissioning—for real-world projects.

Who Should Attend?

This program is tailored for professionals seeking to advance their careers in HVAC design and sustainable building technology, including:

- **HVAC/Mechanical Engineers:** Specializing in building system design and seeking advanced credentials to lead projects.
- **Facility Managers:** Responsible for maintaining energy-efficient, compliant HVAC infrastructure in commercial, educational, or institutional settings.
- **Design Consultants & Architects:** Expanding service offerings to include integrated HVAC design and green building consulting.

- **Construction Professionals:** Aiming to improve coordination between design and installation teams for seamless project execution.
- **Career Changers:** Transitioning into the growing field of sustainable building technology or HVAC engineering.

Whether you're new to HVAC design or a seasoned engineer, this program provides the skills, knowledge, and certification to elevate your expertise and deliver exceptional results.

Course Modules

Course Content (Teaching Modules)

Module 1:	Introduction and Fundamentals of HVAC
Module 2:	Psychrometrics
Module 3:	Codes & Standards, ASHRAE Standards – 55, and 62.1
Module 4:	Building Cooling & Heating Load Calculations
Module 5:	System Selection
Module 6:	Overview of Commissioning and Standard 180
Module 7:	HVAC system's Design Process
Module 8:	Basic Design of Air side systems
Module 9:	Basic Design of Hydronic systems
Module 10:	HVAC Equipment
Module 11:	HVAC Systems
Module 12:	Building Controls and Automation Systems
Module 13:	Sustainability, Green Building/High Performance Buildings/nZEB
Module 14:	Working Example 1 – Education Facility
Module 15:	Working Example 2 – Multistory Office Building