

HVAC System Design & Energy Efficiency

COURSE OVERVIEW

This course provides a practical introduction to HVAC system design with a strong focus on energy efficiency and sustainable building practices. The curriculum emphasizes energy-saving techniques, regulatory compliance, and performance optimization to reduce operating costs and environmental impact. Participants will learn the fundamentals of heating, ventilation, and air-conditioning systems, including load calculations, equipment selection, system layout, and control strategies.

WHO SHOULD ATTEND?

This course is ideal for mechanical engineers, HVAC designers, energy managers, building services engineers, facility managers, and technical professionals involved in the design, operation, or optimization of heating, ventilation, and air-conditioning systems. It is also suitable for engineers and consultants seeking practical skills in energy-efficient HVAC design and sustainable building solutions.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Calculate heating and cooling loads using industry-standard methods.
- Select appropriate HVAC systems for different building applications.
- Design ductwork and piping systems for optimal performance.
- Implement energy conservation measures and sustainable practices.
- Integrate building automation and control systems.
- Analyze system performance and identify optimization opportunities.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Psychrometric principles and air conditioning processes.
- HVAC load calculation methodologies and software tools.
- System selection criteria and performance characteristics.
- Energy efficiency measures and sustainability standards.
- Building automation systems and control strategies.
- Commissioning processes and performance verification.
- Industry codes, standards, and best practices.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded