



*Training Course:
Fundamentals of HVAC*

*31 January - 4 February 2027
Cairo (Egypt)*

Training Course: Fundamentals of HVAC

Training Course code: EN234671 From: 31 January - 4 February 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410
€ Euro

Introduction

Heating, Ventilation, and Air Conditioning HVAC systems are essential for maintaining indoor comfort, air quality, and energy efficiency in residential, commercial, and industrial buildings. A solid understanding of HVAC fundamentals is crucial for proper system design, operation, and maintenance.

This program, designed by Global Horizon Training Center, equips participants with the foundational knowledge and practical skills required to understand, operate, and maintain HVAC systems in accordance with industry best practices.

Course Objectives

By the end of this program, participants will be able to:

- Understand the basic principles of HVAC systems and thermal comfort
- Identify key HVAC components and their functions
- Explain heating, cooling, and ventilation processes
- Analyze system performance and energy efficiency
- Apply basic HVAC design and load calculation concepts
- Perform routine maintenance and troubleshooting
- Ensure indoor air quality and safety standards
- Support efficient HVAC system operation

Target Audience

This program is designed for:

- Mechanical and HVAC Engineers
- Facility and Maintenance Engineers
- Building and Property Managers
- Technicians and Supervisors in HVAC systems
- Operations and Maintenance Personnel
- Professionals involved in building services

Outline

Day 1: Introduction to HVAC Systems

- Overview of HVAC and its applications
- Thermal comfort and environmental conditions
- Components of HVAC systems
- Types of HVAC systems
- Basic system configurations

Day 2: Heating and Cooling Principles

- Heat transfer fundamentals
- Heating systems and equipment
- Cooling systems and refrigeration cycle
- Types of air conditioning systems
- System efficiency considerations

Day 3: Ventilation and Air Distribution

- Ventilation principles and requirements
- Air distribution systems and duct design
- Indoor air quality IAQ
- Air filtration and purification
- System balancing and airflow control

Day 4: HVAC Design and Load Calculations

- Introduction to load calculations
- Cooling and heating load estimation
- Equipment sizing and selection
- Design considerations and standards
- Energy efficiency in design

Day 5: Operation, Maintenance, and Troubleshooting

- HVAC system operation practices
- Preventive and corrective maintenance
- Common system faults and troubleshooting
- Performance monitoring and optimization
- Case studies and real-world applications

Registration form on the Training Course: Fundamentals of HVAC

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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