



*Training Course:  
HVAC/R Building Automation Systems (BAS)*

*15 - 19 September 2024  
Istanbul (Turkey)  
DoubleTree by Hilton Istanbul Esentepe*

## Training Course: HVAC/R Building Automation Systems (BAS)

Training Course code: EN234668 From: 15 - 19 September 2024 Venue: Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees: 6300 ₺ Euro

### Introduction

This advanced program is designed for HVAC Technicians and others involved in the HVAC industry. It will begin with the Fundamentals of HVAC Control Systems and move all the way through troubleshooting systems. This HVAC/R Building Automation Systems BAS training program will prepare trainees with a strong understanding of typical HVAC mechanical systems in a commercial building environment. In turn, the trainees will gain an understanding of the different types of control systems and concepts used in these commercial buildings.

The program discusses electric and electronic control systems used in commercial HVAC systems. Building Automation Systems BAS are discussed in detail, starting with older systems and proceeding to today's modern web-based systems. The student learns the types and methods of operator interfaces in commercial buildings, as well as the different types of BAS inputs and outputs in detail.

Moving on, students learn the skills and in-depth understanding needed to install and program typical modern BAS equipment. Instruction is carried out in a vendor-independent manner. VAV terminal box, Air Handling Unit, and Central Boiler/Chiller Plant Programming will be used as examples.

Moving further on, HVAC Technicians and others involved in the HVAC industry learn BAS advanced implementation strategies regarding energy-saving features. This HVAC/R Building Automation Systems BAS online training program also equips the technician to perform basic service troubleshooting of BAS and understand the role and structure of interoperable systems including BACnet and LON. The student will then be able to work with commissioning agents to ensure proper BAS operation and implementation.

### Course Objectives of HVAC/R Building Automation Systems BAS

## *A series of recorded v i d*

along in the service van format. All scenarios are derived from actual service calls. Upon completion of this HVAC/R Building Automation Systems BAS online training program, the technician will have covered a minimum 70% of the most frequent service calls on BAS/DDC.

- The program complies with ACCA Quality Installation & Maintenance Standards.
- The textbook HVAC Control Systems is included in the tuition for this program.

## **Target Audience of HVAC/R Building Automation Systems BAS**

Commercial HVAC/R Contractors, as well as architects, engineers, designers, manufacturers, wholesalers, or anyone involved with commercial HVAC designHVAC/R Building Automation Systems BAS

### **Course outlines of HVAC/R Building Automation Systems BAS**

Day 1

## HVAC Control Systems Fundamentals

- HVAC Fundamentals
- Commercial Building Heating Systems
- Commercial Building Cooling Systems
- IAQ and Commercial Air Handling Units
- HVAC System Energy Sources
- Control Principles

## Day 2

### HVAC Control Systems Types and BAS Basics

- Control Systems
- Electrical Control Systems
- Electronic Control Systems
- Building Automation Systems and Controllers
- Operator Interfaces
- Building Automation System Inputs and Outputs

## Day 3

### HVAC BAS Installation and Strategies

- Building Automation System Installation, Wiring, and Testing
- Computer Networks and Web-Based Control
- Direct Digital Control Strategies
- Supervisory Control Strategies
- Building Automation Retrofit of Existing Systems

## Day 4

## HVAC BAS System Management and Advanced Technologies

- Building System Management
- Energy Audits and Utility Structures
- Building Automation System Troubleshooting
- Building Automation System Interoperability-Advanced Technologies
- Building Commissioning

## Day 5

### HVAC Troubleshooting DDC Systems & Components

- Troubleshooting Tools & Safety; Overview of "Typical" DDC System Today
- Input Troubleshooting with Multiple, Typical Field Scenarios
- Output Troubleshooting with Multiple, Typical Field Scenarios
- Field Controller Level Troubleshooting Part 1
- Field Controller Level Troubleshooting Part 2 with Multiple, Typical Field Scenarios
- Basic Web-Based Control Systems Troubleshooting Part 1
- Web-Based Control Systems Troubleshooting Part 2 with Multiple, Typical, Field Scenarios



## Registration form on the Training Course: HVAC/R Building Automation Systems (BAS)

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

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Company Information

Company Name: .....  
Address: .....  
City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

### Easy Ways To Register

Telephone:  
+201095004484 to  
provisionally reserve your  
place.

Fax your completed  
registration  
form to: +20233379764

E-mail to us :  
info@gh4t.com  
or training@gh4t.com

Complete & return the  
booking form with cheque  
to: Global Horizon  
3 Oudai street, Aldouki,  
Giza, Giza Governorate,  
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