



*Training Course:*  
*Building Automation Systems (BAS)*

*11 - 15 May 2025*  
*Manama (Bahrain)*  
*Fraser Suites*

## Training Course: Building Automation Systems (BAS)

Training Course code: EN235839 From: 11 - 15 May 2025 Venue: Manama (Bahrain) - Fraser Suites Training Course  
Fees: 5300 € Euro

### Introduction

Building Automation Systems BAS are critical for modern building management, enabling energy efficiency, cost reduction, and improved occupant comfort. This training program provides a comprehensive understanding of BAS components, communication protocols, integration techniques, and troubleshooting methods. Participants will gain both theoretical knowledge and practical skills in managing and optimizing BAS.

### Target Audience

- Facility managers and engineers
- HVAC technicians and contractors
- Electrical and mechanical engineers
- IT professionals involved in smart building technologies
- Energy and sustainability managers

### Objectives

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

- Understand the fundamentals of BAS and its role in building management
- Identify and operate key components of BAS, including controllers, sensors, and actuators
- Work with industry-standard communication protocols such as BACnet, Modbus, and LonWorks
- Optimize building energy efficiency using BAS features
- Troubleshoot and maintain BAS for long-term operational efficiency
- Understand cybersecurity risks and strategies for BAS protection

### Training Program Outline

#### Day 1: Introduction to Building Automation Systems BAS

- Overview of BAS and its importance in modern buildings
- Components of BAS: Controllers, sensors, actuators, and interfaces
- BAS architecture and system integration
- Overview of industry standards and protocols ASHRAE, ISO, etc.
- Hands-on: Exploring a BAS interface

#### Day 2: BAS Communication Protocols & System Integration

- Understanding communication protocols:
  - BACnet - Open standard for building automation
  - Modbus - Industrial automation and control
  - LonWorks - Networked control systems
- BAS system interoperability and integration with HVAC, lighting, security, and fire systems
- Cloud-based BAS and IoT integration for smart buildings
- Hands-on: Setting up and configuring BACnet and Modbus communication

#### Day 3: BAS Energy Management & Optimization

- The role of BAS in energy efficiency and sustainability
- Demand response and load management strategies
- HVAC optimization and smart scheduling techniques
- Case studies: Successful BAS implementation for energy savings
- Hands-on: Configuring energy-saving automation strategies

#### Day 4: Troubleshooting & Maintenance of BAS

- Common BAS issues and their root causes
- Diagnosing system errors using BAS software
- Predictive maintenance and remote monitoring
- Updating firmware and software for BAS components
- Hands-on: Simulating and resolving BAS system faults

#### Day 5: BAS Cybersecurity & Future Trends

- Cybersecurity threats in BAS: Risks and vulnerabilities
- Securing BAS networks: Firewalls, encryption, and access control
- The role of AI and machine learning in future BAS developments
- Emerging trends in smart buildings and digital twins
- Hands-on: Implementing cybersecurity best practices in BAS

## Registration form on the Training Course: 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: .....  
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### Company Information

Company Name: .....  
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### Person Responsible for Training and Development

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

- Please find enclosed a cheque made payable to Global Horizon
- Please invoice me
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### Easy Ways To Register

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