



*Training Course:  
Fundamentals of Process Technology*

*18 - 29 October 2026*

*Cairo (Egypt)*

*Holiday Inn & Suites Cairo Maadi, an IHG Hotel*

## Training Course: Fundamentals of Process Technology

Training Course code: EN6050 From: 18 - 29 October 2026 Venue: Cairo (Egypt) - Holiday Inn & Suites Cairo Maadi, an IHG Hotel Training Course Fees: 6950 € Euro

### Introduction

Process technology is at the core of industries such as oil & gas, petrochemicals, power generation, and manufacturing. It involves transforming raw materials into valuable products through controlled physical and chemical processes. A solid understanding of process fundamentals is essential for safe operation, efficiency, and product quality.

This program, designed by Global Horizon Training Center, provides a comprehensive 10-day training that equips participants with foundational and practical knowledge of process systems, equipment, and operations in industrial environments.

### Course Objectives

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

- Understand core concepts of process technology and industrial operations
- Identify and operate key process equipment
- Interpret PFDs and P&IDs effectively
- Apply principles of fluid flow, heat transfer, and mass balance
- Understand process control and instrumentation basics
- Identify operational risks and safety measures
- Analyze and troubleshoot basic process issues
- Support efficient and safe plant operations

### Target Audience

This program is designed for:

- Entry-level Process and Chemical Engineers
- Plant Operators and Technicians
- Maintenance and Operations Personnel
- Supervisors in industrial facilities
- Engineering Graduates and Students
- Professionals new to process industries

### Outline

#### Day 1: Introduction to Process Technology

- Overview of process industries
- Types of processes physical and chemical
- Process flow diagrams PFDs
- Plant layout and systems
- Safety fundamentals

#### Day 2: Basic Chemistry and Process Principles

- Chemical reactions and stoichiometry
- Phase behavior and properties
- Material balance basics
- Process inputs and outputs
- Process efficiency concepts

#### Day 3: Fluid Flow Fundamentals

- Fluid properties density, viscosity
- Flow regimes and Reynolds number
- Pressure drop and flow control
- Pumps and piping systems
- Practical applications

#### Day 4: Heat Transfer and Energy Systems

- Heat transfer modes conduction, convection, radiation
- Heat exchangers and boilers
- Energy balance concepts
- Thermal efficiency
- Industrial applications

#### Day 5: Process Equipment Overview

- Pumps, compressors, and turbines
- Reactors and separators
- Valves and control devices
- Storage systems
- Equipment operation basics

#### Day 6: Process Control and Instrumentation

- Introduction to control systems
- Sensors and measurement devices
- Control loops and PID basics
- SCADA and automation
- Monitoring and data acquisition

#### Day 7: PFD and P&ID Interpretation

- Reading process flow diagrams
- Understanding piping and instrumentation diagrams

- Identifying equipment and symbols
- Process logic and flow paths
- Practical exercises

#### Day 8: Safety and Risk Management

- Process safety management PSM
- Hazard identification HAZOP basics
- Risk assessment and mitigation
- Emergency response procedures
- Safety regulations and standards

#### Day 9: Troubleshooting and Operational Efficiency

- Identifying process deviations
- Root cause analysis
- Performance monitoring
- Process optimization techniques
- Energy efficiency improvement

#### Day 10: Integration, Case Studies, and Practical Applications

- Integrated process operations
- Real-world industrial case studies
- Best practices in process management
- Continuous improvement strategies
- Final review and assessment

## Registration form on the Training Course: Fundamentals of Process Technology

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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  
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Complete & return the  
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