



*Training Course:
Process Plant Start-up, Commissioning &
Troubleshooting*

*25 April - 6 May 2027
Cairo (Egypt)*

Training Course: Process Plant Start-up, Commissioning & Troubleshooting

Training Course code: EN6018 From: 25 April - 6 May 2027 Venue: Cairo (Egypt) - Training Course Fees: 6950 € Euro

Introduction

Start-up and commissioning are high-risk, high-impact phases in the lifecycle of any process plant. They require rigorous planning, precise execution, and rapid troubleshooting to ensure safe operation, achieve design performance, and transition smoothly to steady-state production.

This advanced 10-day program, designed by Global Horizon Training Center, equips participants with structured methodologies, detailed procedures, and real-world techniques to manage commissioning, execute start-up, and troubleshoot complex process and equipment issues effectively.

Course Objectives

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

- Plan and manage commissioning and start-up activities end-to-end
- Execute pre-commissioning tasks and verify system readiness
- Commission equipment, utilities, and control systems
- Apply safe and efficient start-up procedures
- Diagnose and troubleshoot process, mechanical, and control issues
- Perform root cause analysis RCA and implement corrective actions
- Optimize plant performance during early operation
- Ensure compliance with safety, quality, and operational standards

Target Audience

This program is designed for:

- Process and Chemical Engineers
- Commissioning and Start-up Engineers
- Project and Construction Engineers
- Operations and Maintenance Personnel
- Control and Instrumentation Engineers
- HSE and Quality Professionals

Outline

Day 1: Commissioning Fundamentals and Project Integration

- Commissioning lifecycle and phases
- Roles, responsibilities, and interfaces
- Systemization and turnover philosophy
- Mechanical Completion MC, Ready for Commissioning RFC
- Documentation and planning

Day 2: Commissioning Planning and Documentation

- Commissioning strategies and execution plans
- Checklists, procedures, and punch lists
- Commissioning schedules and resource planning
- Risk assessment and safety planning
- Quality assurance and compliance

Day 3: Pre-Commissioning Activities - Mechanical Systems

- Cleaning, flushing, and blowing
- Drying and preservation
- Hydrostatic and pneumatic testing
- Leak detection and rectification
- Reinstatement procedures

Day 4: Pre-Commissioning Activities - Electrical & Instrumentation

- Electrical testing and energization
- Cable testing and insulation checks
- Instrument calibration and loop checking
- Control system verification I/O checks
- Safety system testing

Day 5: Commissioning of Equipment and Utilities

- Static and dynamic commissioning
- Pumps, compressors, and rotating equipment
- Boilers, heat exchangers, and process units
- Utilities steam, water, air, power
- Functional testing

Day 6: Control Systems and Automation

- DCS/PLC commissioning
- Control loops and tuning basics
- Interlocks and safety systems ESD, SIS
- Cause & effect verification
- Troubleshooting control issues

Day 7: Start-up Planning and Execution

- Start-up philosophy and sequencing
- System line-up and readiness checks

- Initial operation procedures
- Monitoring key process parameters
- Managing deviations and risks

Day 8: Advanced Troubleshooting Techniques

- Identifying process deviations
- Equipment troubleshooting pumps, compressors, valves
- Heat transfer and flow issues
- Instrumentation and control problems
- Data-driven diagnostics

Day 9: Root Cause Analysis and Optimization

- RCA methodologies 5 Whys, Fishbone, FMEA
- Failure analysis and reporting
- Corrective and preventive actions
- Performance optimization strategies
- Early operation improvements

Day 10: Performance Testing, Handover, and Best Practices

- Performance testing and acceptance criteria
- System optimization and stabilization
- Documentation and handover to operations
- Lessons learned and best practices
- Case studies and final assessment

Registration form on the Training Course: Process Plant Start-up, Commissioning & Troubleshooting

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

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Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
Position:
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Payment Method

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