



*Training Course:
HYSYS Simulation & P&ID Generation*

*7 - 11 February 2027
Cairo (Egypt)*

Training Course: HYSYS Simulation & P&ID Generation

Training Course code: EN235617 From: 7 - 11 February 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

Process simulation and engineering documentation are essential for designing, analyzing, and optimizing industrial processes in oil & gas, petrochemicals, and energy sectors. **Aspen HYSYS** is a leading tool used for steady-state and dynamic simulation, while Piping & Instrumentation Diagrams P&IDs are critical for translating process designs into operational systems.

This 5-day intensive training program, developed by **Global Horizon Training Center**, provides a practical and integrated approach to process simulation using HYSYS and the development of accurate P&IDs. It combines simulation fundamentals with engineering documentation practices to support real-world process design and operation.

Participants will gain hands-on experience in building simulation models, analyzing process performance, and generating P&IDs aligned with industry standards.

Course Objectives

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

- Understand process simulation fundamentals
- Build and run simulations using Aspen HYSYS
- Select appropriate thermodynamic models
- Model key process units separators, compressors, heat exchangers
- Interpret simulation results and optimize processes
- Develop and read P&IDs
- Integrate simulation outputs into engineering design documentation
- Apply industry standards for P&ID generation

Target Audience

- Process and Chemical Engineers
- Oil & Gas Engineers
- Design and Project Engineers
- Plant Operations Engineers
- Engineering Consultants and Technical Specialists

Outline

Day 1: Introduction to Process Simulation & HYSYS Basics

- Overview of process simulation in engineering
- Introduction to Aspen HYSYS interface
- Thermodynamic models and fluid packages
- Creating basic simulation cases

Day 2: Modeling Process Equipment

- Modeling separators and flash systems
- Heat exchangers and energy balance
- Compressors and pumps
- Stream properties and process flow analysis

Day 3: Advanced Simulation and Optimization

- Process optimization techniques
- Sensitivity analysis
- Case studies in oil & gas processing
- Troubleshooting simulation issues

Day 4: Introduction to P&ID and Engineering Documentation

- Fundamentals of P&IDs
- Symbols and standards ISA, ISO
- Reading and interpreting P&IDs
- Linking process flow diagrams PFDs to P&IDs

Day 5: P&ID Development & Integrated Workshop

- Developing P&IDs from simulation data
- Control loops and instrumentation representation
- Safety and control integration
- Final workshop: Building a process simulation and generating P&ID
- Review and evaluation

Registration form on the Training Course: HYSYS Simulation & P&ID Generation

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