



Training Course:
Mastering Aspen HYSYS - EHY101: Advanced
Training for Process Simulation and Optimization

6 - 10 June 2027
Cairo (Egypt)

Training Course: Mastering Aspen HYSYS - EHY101: Advanced Training for Process Simulation and Optimization

Training Course code: EN235101 From: 6 - 10 June 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

Aspen HYSYS is a leading process simulation platform used to design, analyze, and optimize complex processes in the oil & gas and chemical industries. Mastering its advanced capabilities enables engineers to enhance efficiency, reduce operational costs, and improve decision-making.

This program, designed by Global Horizon Training Center, equips participants with advanced skills in process simulation and optimization using Aspen HYSYS, focusing on practical applications, model accuracy, and performance enhancement.

Course Objectives

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

- Build and manage advanced process simulation models in Aspen HYSYS
- Apply appropriate thermodynamic models and property packages
- Simulate and optimize complex unit operations
- Perform sensitivity and scenario analysis for process improvement
- Validate models and ensure simulation accuracy
- Conduct energy integration and process optimization
- Troubleshoot simulation issues and improve model convergence
- Support process design and operational decision-making

Target Audience

This program is designed for:

- Chemical and Process Engineers
- Oil & Gas and Petrochemical Professionals
- Process Design and Simulation Engineers
- Operations and Production Engineers
- Technical Specialists involved in process optimization
- Professionals seeking advanced expertise in Aspen HYSYS

Outline

Day 1: Advanced HYSYS Fundamentals and Model Setup

- Overview of Aspen HYSYS environment and workflow
- Fluid package selection and thermodynamic configuration
- Stream definition and unit operation setup
- Model initialization and convergence basics
- Best practices for simulation setup

Day 2: Thermodynamics and Process Modeling

- Advanced thermodynamic models and selection criteria
- Phase behavior and equilibrium calculations
- Handling non-ideal and complex systems
- Property estimation and validation
- Integration of fluid properties into simulations

Day 3: Advanced Unit Operations and Process Design

- Distillation column modeling and optimization
- Reactor modeling and reaction kinetics
- Heat exchanger design and energy integration
- Compression and pumping systems
- Troubleshooting unit operation performance

Day 4: Process Optimization and Performance Analysis

- Sensitivity analysis and case studies
- Process optimization techniques
- Energy efficiency and heat integration
- Identifying bottlenecks and performance issues
- Scenario analysis for operational improvement

Day 5: Dynamic Simulation, Troubleshooting, and Applications

- Introduction to dynamic simulation and process control
- Troubleshooting convergence and modeling issues
- Model validation and verification techniques
- Reporting and visualization of results
- Case studies and real-world applications

Registration form on the Training Course: Mastering Aspen HYSYS - EHY101: Advanced Training for Process Simulation and Optimization

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