Global Horizon
TRAINING CENTER

Training Course:
Enhanced Process Design and Simulation with Aspen HYSYS - EHY223

14 - 18 March 2027
Cairo (Egypt)

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Training Course code: EN235104 From: 14 - 18 March 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 Euro

Introduction

Aspen HYSYS is a leading process simulation tool widely used in the oil & gas and chemical industries to design, analyze, and optimize complex processes. Advanced simulation capabilities enable engineers to improve efficiency, reduce costs, and enhance operational performance.

This program, designed by Global Horizon Training Center, equips participants with advanced knowledge and practical skills in process design and simulation using Aspen HYSYS, focusing on complex systems, optimization techniques, and real-world industrial applications.

Course Objectives

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

- Utilize Aspen HYSYS effectively to develop and manage simulation models
- Apply advanced thermodynamic models and property packages
- Design and optimize complex unit operations
- Perform sensitivity analysis and process optimization
- Conduct heat and material balance validation
- Apply dynamic simulation and transient analysis concepts
- Integrate Aspen HYSYS with external tools such as Excel
- Troubleshoot simulation challenges and improve model accuracy

Target Audience

This program is designed for:

- Chemical and Process Engineers
- Engineers working in Oil & Gas and Petrochemical industries
- Process Design and Simulation Specialists
- Operations and Production Engineers
- Graduates with prior knowledge of process engineering and HYSYS
- Professionals involved in process optimization and troubleshooting

Outline

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Day 1: Aspen HYSYS Fundamentals and Simulation Setup

- Overview of Aspen HYSYS and process simulation concepts
- Simulation workflow and project structure
- User interface navigation and workspace configuration
- Creating simulation cases and importing data
- Selecting components and thermodynamic packages

Day 2: Advanced Thermodynamics and Property Modeling

- Review of thermodynamic models and selection criteria
- Property packages for complex systems
- Phase equilibrium and non-ideal system modeling
- Electrolyte thermodynamics and specialized applications
- Handling complex fluid systems

Day 3: Advanced Unit Operations Modeling

- Distillation column design and optimization
- Reactor modeling and reaction kinetics
- Heat exchanger networks and energy integration
- Compressor and turbine simulation
- Troubleshooting unit operation performance

Day 4: Process Optimization and Case Studies

- Sensitivity analysis and parameter optimization
- Heat and material balance validation
- Implementing design specifications and constraints
- Process modification and performance improvement
- Real-world case studies and simulation challenges

Day 5: Dynamic Simulation and Advanced Techniques

- Introduction to dynamic simulation and transient analysis
- Process control and system response behavior
- Integration with Excel for custom calculations
- Utilizing Aspen HYSYS utilities and productivity tools
- Troubleshooting, best practices, and model validation

Registration form on the Training Course: Enhanced Process Design and Simulation with Aspen HYSYS - EHY223

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

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

Company Information

Company Name: .....
Address: .....
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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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Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.