# Global Horizon
## TRAINING CENTER

*Training Course:*
*Advanced Process Simulation and Analysis with*
*Aspen HYSYS - EHY2314*

*20 - 24 April 2025*
*Istanbul (Turkey)*
*DoubleTree by Hilton Istanbul Esentepe*

# Training Course:
# Advanced Process Simulation and Analysis with Aspen HYSYS - EHY2314

Training Course code:  EN235105  From:  20 - 24 April 2025  Venue:  Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees:  6500  Euro

## Introduction

Welcome to the Advanced Process Simulation and Analysis with Aspen HYSYS training program EHY2314. Aspen HYSYS is a powerful process simulation software widely used in the chemical, petrochemical, and other process industries for designing, optimizing, and troubleshooting various unit operations. This advanced training course aims to take your proficiency in Aspen HYSYS to the next level, providing you with in-depth knowledge and hands-on experience to effectively simulate and analyze complex processes.

## Objectives

By the end of this training program, participants will:

- Gain a comprehensive understanding of Aspen HYSYS and its advanced capabilities.
- Master the use of advanced thermodynamics models and equations of state in simulations.
- Develop expertise in modeling various unit operations, including distillation columns, reactors, and heat exchangers.
- Learn how to incorporate kinetics and reaction mechanisms for more accurate simulations.
- Acquire skills in simulating multicomponent and multiphase systems with Aspen HYSYS.
- Explore process optimization techniques using sensitivity analysis and parameter estimation.
- Learn to troubleshoot common simulation issues and ensure convergence in complex simulations.
- Understand dynamic simulation and transient analysis to study process dynamics.
- Analyze heat and mass transfer operations, including heat exchangers and mass transfer equipment.
- Discover best practices for efficient simulation workflows and integration with other engineering software.
- Apply Aspen HYSYS to real-world applications through case studies and practical examples.

## Target Audience

This training program is designed for professionals and students in the fields of chemical engineering, process engineering, and related disciplines. It is ideal for individuals who already possess a basic understanding of Aspen HYSYS and have prior experience in process simulation. Participants who seek to enhance their knowledge and proficiency in advanced process modeling, optimization, and analysis using Aspen HYSYS will find this course highly beneficial.

## Training program outline

## Day 1: Introduction to Aspen HYSYS and Advanced Concepts

- Introduction to Aspen HYSYS and its applications in the industry
- Advanced thermodynamics models and equations of state
- Complex unit operations and advanced components
- Advanced use of Aspen HYSYS property packages

## Day 2: Advanced Process Modeling

- Detailed modeling of various unit operations e.g., distillation columns, reactors, heat exchangers
- Incorporating kinetics and reaction mechanisms in simulations
- Simulation of multicomponent and multiphase systems
- Advanced Aspen HYSYS features for process modeling.

## Day 3: Process Optimization and Troubleshooting

- Techniques for process optimization using Aspen HYSYS
- Sensitivity analysis and parameter estimation
- Troubleshooting common simulation issues and convergence problems
- Dynamic simulation and transient analysis

## Day 4: Heat and Mass Transfer Analysis

- Detailed analysis of heat exchanger performance
- Simulation of condensers, reboilers, and fired heaters.
- Modeling of mass transfer operations e.g., absorption, adsorption, and stripping
- Aspen HYSYS tools for heat and mass transfer analysis

## Day 5: Advanced Topics and Integration

- Advanced topics in process simulation e.g., recycle loops, pressure swing adsorption
- Integration with other engineering software and data exchange
- Best practices for efficient simulation and analysis workflows
- Real-world applications and case studies using Aspen HYSYS

# Registration form on the Training Course:
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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

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### 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 or training@gh4t.com | Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt. |