Global Horizon
TRAINING CENTER

Training Course:
Aspen HYSYS: Process Modeling MBA

24 - 28 November 2024
Sharm El-Sheikh (Egypt)
Sheraton Sharm Hotel

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Aspen HYSYS: Process Modeling MBA

Training Course code: EN636 From: 24 - 28 November 2024 Venue: Sharm El-Sheikh (Egypt) - Sheraton Sharm Hotel
Training Course Fees: 4200 Euro

Introduction

The training course of Aspen HYSYS: Process Modeling MBA, is prepared for those whom have A background in chemical/process engineering, the oil/gas industry, or petroleum refining, and Basics of and handling the Aspen HYSYS Steady-state simulation.

Course Objectives of Aspen HYSYS: Process Modeling MBA

- Learn to build, navigate and optimize process simulations using Aspen HYSYS.
- Learn efficient use of different HYSYS functions to build advanced steady-state process simulations.
- Leverage the intuitive solving capabilities and other key features of Aspen HYSYS that allow for rapid Flowsheet construction.
- Use the Workbook and Flowsheet interfaces for quick and effective modeling.
- Discover how multi-flow sheet integration can streamline and organize simulation efforts.
- Improve the convergence characteristics of columns and flow sheets; troubleshoot common problems.

Course Benefits of Aspen HYSYS: Process Modeling MBA

- Leverage the intuitive bi-directional solver and other key features of Aspen HYSYS that allow for rapid flowsheet construction
- Use the Workbook and Process Flow Diagram PFD interfaces for quick and effective modeling
- Discover how multi-flowsheet integration can streamline and organize simulation efforts
- Explore different means of reporting results, including the use of Microsoft Excel VB macros
- Evaluate the performance of existing equipment by leveraging the rating capabilities of Aspen HYSYS
- Improve the convergence characteristics of columns and flowsheets; troubleshoot common problems
- Perform Case studies to determine the optimum operating point for a process
- Understand the pipeline hydraulics calculations used to assess the sizing requirements for a gas gathering system

Who Should Attend

- Process Engineers with Process simulation experience.
- New engineering graduates/technologists who will be using Aspen HYSYS in their daily work.
- Process engineers doing process design and optimization projects and studies.
- Plant engineers checking plant performance under different operating conditions.
- R&D engineers and researchers using Aspen HYSYS for process synthesis.

Course Outlines of Aspen HYSYS: Process Modeling MBA

Introduction to Oil & Gas industries, Chemical industries, Process simulations, EOS, Thermodynamic property packages.

Getting started with Aspen HYSYS

Selecting the necessary components, select a property package to define a Fluid Package, enter into the simulation environment, specify required parameters in order to execute flash calculations and fully define material streams, modify and set desired units of measure, review stream analysis options.

Aspen HYSYS Simulations *

Operating and flow sheeting of various unit operations in the HYSYS simulation environment. Such as Pumps, Compressors, Expander, Heat exchangers, Flash Separators, Reactors, Absorbers, Distillation Columns, etc. Modelling Adjust, Set, Balance operation within the simulation environment.

Oil Characterization

Introduce the Aspen HYSYS Oil Manager and Assay Management features and how they are used for assay characterization. Performing Oil characterization for a crude unit.

NGL Fractionation

Introduce Aspen HYSYS column models and templates, Use the Input Expert to add and define a distillation column, Add and manipulate column specifications to meet process objectives.

Optimization

Introduction to Optimizer & Spreadsheet and how they are used for optimization. Use the optimizer tool in HYSYS to optimize flow sheets. Use the spreadsheet to perform calculations.

CSTR

Introduction to reactors. Simulation of CSTR and create reactions in HYSYS for the production of propylene glycol.

Propane Refrigeration Loop

Build and analyze a propane refrigeration loop. Understand how to simulate the vapor compression loop. Understand forward-backward information propagation in HYSYS. Using the spreadsheet to calculate the COP Coefficient Of Performance for the loop.

Refrigerated Gas Plant

Model a Simplified version of Refrigerated Gas Plant. Adding a hypothetical component in HYSYS. Understand logical operations Balances and Adjusts. Use the Case Study tool to perform case studies on your simulation.

Gas Gathering System

Model a gas gathering system located on varied terrain is simulated using the steady-state capabilities of HYSYS. Use the Pipe Segment operation to model single and multi-phase fluid flow.

Turbo Expander Plant

Model, an LNG Exchanger to simulate multi-pass exchangers In Hysys. Add Columns using the Input Experts. Add extra specifications to columns

Safety Analysis Environment **

Introduce the HYSYS Safety Analysis Environment as a comprehensive, process-wide pressure relief modeling tool. Size and rate pressure safety valves PSVs for single or multiple relief scenarios. Demonstrate how to set up and report results from PSV calculations in the Safety Analysis Environment

Gas Dehydration Unit Or a Specific project

Model a typical gas dehydration unit and study gas saturation, hydrate formation conditions, and unit operation performance throughout the model. Apply the Recycle operation as a flowsheet-building tool appropriate for a variety of simulations.

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Registration form on the Training Course: Aspen HYSYS: Process Modeling MBA

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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: .....
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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

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.