

Aspen Plus - Intermediate Process Modelling

Cairo (Egypt)

29 September - 3 October 2024

UK Training

PARTNER



Aspen Plus - Intermediate Process Modelling

Code: OC28 From: 29 September - 3 October 2024 City: Cairo (Egypt) Fees: 3900 Pound

Introduction

The Aspen Plus - Intermediate Process Modeling Course is a comprehensive program designed to provide participants with intermediate-level knowledge and practical skills in process modeling using the Aspen Plus software. Aspen Plus is a widely used process simulation tool that enables engineers and researchers to model and optimize chemical processes. This course is specifically tailored for individuals who already have a basic understanding of Aspen Plus and want to enhance their modeling capabilities to tackle more complex process scenarios. Through hands-on exercises, case studies, and interactive sessions, participants will gain proficiency in building, simulating, and analyzing process models using Aspen Plus.

Objectives

- Familiarize participants with the Aspen Plus software and its capabilities for process modeling.
- Enhance understanding of unit operations and their representation in Aspen Plus.
- Develop skills in building and configuring complex process models using Aspen Plus.
- Learn advanced modeling techniques, such as heat integration, optimization, and sensitivity analysis.
- Gain proficiency in analyzing process performance, troubleshooting, and optimizing process operations.
- Apply Aspen Plus to solve real-world process engineering problems and make informed decisions.
- Acquire best practices for effective utilization of Aspen Plus in process modeling and optimization.

Course Outline

Day 1

Introduction to Aspen Plus and Process Modeling Fundamentals

- Overview of Aspen Plus and its features for process modeling.
- Review of process modeling fundamentals.
- Introduction to Aspen Plus user interface and navigation.
- Building and configuring basic process models in Aspen Plus.

Day 2

Advanced Unit Operations Modeling

- Modeling distillation columns, reactors, heat exchangers, and other advanced unit operations.
- Configuring complex unit operations and customizing models in Aspen Plus.
- Troubleshooting common issues in unit operation modeling.

Day 3

Heat Integration and Energy Optimization



- Introduction to heat integration and pinch analysis concepts.
- Heat exchanger network HEN design and optimization using Aspen Plus.
- Energy optimization strategies and techniques in Aspen Plus.

Day 4

Process Optimization and Sensitivity Analysis

- Introduction to process optimization techniques in Aspen Plus.
- Configuring optimization cases and defining objective functions.
- Performing sensitivity analysis and evaluating parameter effects on process performance.

Day 5

Advanced Topics and Case Studies

- Modeling and analyzing non-ideal behavior and phase equilibria.
- Handling complex reaction kinetics and reactor modeling.
- Case studies and practical exercises applying Aspen Plus to real-world process engineering problems.



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International House 185 Tower Bridge
Road London SE1 2UF United Kingdom



+44 7401 1773 35
+44 7480 775526



training@blackbird-training.com



www.blackbird-training.com

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