

## Aspen Plus - Intermediate Process Modelling

*London (UK)*

*9 - 13 December 2024*

UK Training

# PARTNER



## Aspen Plus - Intermediate Process Modelling

Code: OC28 From: 9 - 13 December 2024 City: London (UK) Fees: 5100 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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