

Aspen Plus - Intermediate Process Modelling

25 – 29 October 2026
Sharm El-Sheikh (Egypt)

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Introduction

The Aspen Plus - Intermediate Process Modeling Course is a specially designed program aimed at enhancing participants' knowledge and skills in process modeling in chemical engineering. Focused on intermediate-level concepts, this course bridges the gap between basic process modeling and advanced simulation techniques.

Aspen Plus is a leading process simulation software widely used by engineers and researchers to model, simulate, and optimize chemical processes. This Aspen Plus course provides participants with a deeper understanding of the software's capabilities, enabling them to handle more complex intermediate processing scenarios. By combining theory, hands-on practice, and real-world case studies, this course ensures participants are equipped with the tools and techniques to excel in process simulation and digital intermediate process modeling.

Course Objectives

- Understand what Aspen Plus is, including its features and applications in process modeling in chemical engineering.
- Master the fundamentals of Aspen Plus introduction, user interface, and navigation.
- Build and configure intermediate models to simulate complex chemical processes.
- Enhance skills in advanced modeling techniques such as heat integration, energy optimization, and sensitivity analysis.
- Develop expertise in modeling unit operations, including reactors, distillation columns, and heat exchangers.
- Learn troubleshooting techniques for common process simulation challenges.
- Apply Aspen Plus to solve real-world engineering problems and optimize process performance.

Course Outlines

Day 1: Introduction to Aspen Plus and Process Modeling Fundamentals

- Overview of Aspen Plus introduction and its role in process modeling in chemical engineering.
- Understanding the intermediate meaning in the context of process modeling.
- Exploring the Aspen Plus user interface, tools, and navigation.
- Building and configuring basic process models in Aspen Plus.

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Day 2: Advanced Unit Operations Modeling

- Modeling and simulating key unit operations, including distillation columns, reactors, and heat exchangers.
- Configuring complex operations and customizing models for intermediate processing needs.
- Troubleshooting challenges in unit operation modeling within Aspen Plus.

Day 3: Heat Integration and Energy Optimization

- Introduction to heat integration and pinch analysis concepts.
- Designing heat exchanger networks HEN and performing energy optimization using Aspen Plus.
- Practical applications of digital intermediate process modeling for energy efficiency.

Day 4: Process Optimization and Sensitivity Analysis

- Understanding process optimization techniques and their applications in Aspen Plus.
- Configuring optimization cases, defining objective functions, and evaluating results.
- Performing sensitivity analysis to study parameter effects on process performance.

Day 5: Advanced Topics and Case Studies

- Modeling non-ideal behaviors and analyzing phase equilibria in Aspen Plus.
- Handling complex reaction kinetics and advanced reactor modeling scenarios.
- Engaging with practical case studies to apply intermediate model skills to real-world challenges.

Why Attend this Course: Wins & Losses!

- Gain a strong understanding of what Aspen Plus is and how it can elevate your process modeling capabilities.
- Master intermediate processing techniques and tools to solve more complex engineering problems.
- Learn practical strategies for heat integration, energy optimization, and sensitivity analysis.
- Build expertise in intermediate models and apply them to real-world scenarios.
- Receive professional guidance on best practices for effective utilization of Aspen Plus.

Conclusion

The Aspen Plus - Intermediate Process Modeling Course is an ideal program for professionals looking to elevate their process simulation skills. Whether you're a chemical engineer, researcher, or technical expert, this course equips you with the knowledge to excel in process modeling in chemical engineering. By mastering intermediate processing techniques and leveraging advanced tools like Aspen Plus, you can significantly enhance your ability to simulate, troubleshoot, and optimize complex chemical processes.

Don't miss this opportunity to deepen your expertise in intermediate models and become proficient in digital intermediate process modeling. Enroll today to gain a competitive edge in the field of chemical engineering!

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