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PROCESS SIMULATION USING ASPEN HYSYS OR HONEYWELL UNISIM

Start Date:	09/11/2026	**End Date:**	13/11/2026
Categories:	Oil & Gas	**Venues:**	London
Formats:	In Person	**Instructors:**	

OVERVIEW

This course provides practical training in process simulation using Aspen HYSYS or Honeywell UniSim. Participants will learn to model, analyze, and optimize refinery and chemical processes using steady-state simulations.

OBJECTIVES

By the end of this course, participants will be able to: • Build and simulate steady-state models for oil & gas and petrochemical processes. • Apply thermodynamic packages and unit operation modeling. • Perform mass and energy balances and process optimizations. • Troubleshoot simulation errors and improve model convergence. • Use simulation output for design, optimization, and operational decisions.

COURSE OUTLINE

1. Interface Overview and Model Setup in HYSYS/UniSim 2. Unit Operations: Reactors, Separators, Heat Exchangers, Compressors 3. Thermodynamic Models and Property Selection 4. Process Optimization and Case Studies 5. Troubleshooting and Reporting Simulation Results

TARGET AUDIENCE

Process engineers, chemical engineers, control engineers, and simulation analysts using HYSYS or UniSim for plant modeling.

METHODOLOGY

Hands-on simulation labs, guided exercises, performance modeling, and optimization cases.

CONCLUSION

Participants will confidently use Aspen HYSYS or Honeywell UniSim for steady-state simulation to support process design and operational decisions.

DAILY AGENDA

Day 1: Getting Started with Simulation Tools

Navigating interfaces, project setup, and basic model configuration.

Day 2: Modeling Unit Operations

Simulating reactors, separators, exchangers, pumps, and compressors.

Day 3: Thermodynamics and Process Calculations

Choosing fluid packages and conducting mass/energy balances.

Day 4: Optimization and Scenario Testing

Running multiple cases to improve efficiency, yield, and reliability.

Day 5: Troubleshooting and Results Interpretation

Resolving simulation errors and producing performance reports.

For more information, please contact us:
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