

## PROCESS SIMULATION USING ASPEN HYSYS OR HONEYWELL UNISIM

<b>Start Date:</b>	23/11/2026	<b>End Date:</b>	27/11/2026
<b>Categories:</b>	Oil & Gas	<b>Venues:</b>	London
<b>Formats:</b>	In Person	<b>Instructors:</b>	

### 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.

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*For more information, please contact us:*

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