REFINERY OPTIMIZATION THROUGH SIMULATION

Start Date:	23/11/2026	End Date:	27/11/2026
Categories:	Oil & Gas	Venues:	Seoul
Formats:	In Person	Instructors:	

OVERVIEW

This course teaches participants how to use simulation tools for process optimization in refining environments. The focus is on enhancing yield, energy efficiency, and operational flexibility using model-based strategies.

OBJECTIVES

By the end of this course, participants will be able to: • Model key refinery units and evaluate performance using simulation. • Identify optimization opportunities in CDU, VDU, reforming, and hydroprocessing. • Integrate utilities and energy balances into optimization. • Run case scenarios and compare optimization strategies. • Translate simulation insights into operational improvements.

COURSE OUTLINE

1. Simulation of Refinery Units: CDU, VDU, Reformers 2. Yield Improvement and Energy Optimization 3. Sensitivity Analysis and Scenario Testing 4. KPI Tracking and Reporting Optimization Results 5. Optimization Strategies for Operations and Planning

TARGET AUDIENCE

Refinery engineers, planners, operations analysts, and energy managers seeking to improve efficiency and output through simulation.

METHODOLOGY

Refinery model building, economic case runs, yield analysis, and optimization simulations.

CONCLUSION

Participants will learn to model and optimize refinery processes, enhancing profitability and operational decision-making.

DAILY AGENDA

Day 1: Modeling Refinery Units

Simulating CDU, VDU, reformers, and their integration.

Day 2: Improving Yields and Utilities

Optimizing cut points, energy recovery, and utility systems.

Day 3: Scenario Planning and Sensitivity

Testing case variables for production and margin impact.

Day 4: Operational KPI Modeling

Tracking refinery KPIs and reporting economic indicators.

Day 5: Strategic Optimization Planning

Designing simulation-based improvement plans for operations.