



*Training Course:
Yield Optimization*

*13 - 17 April 2025
Sharm El-Sheikh (Egypt)
Sheraton Sharm Hotel*

Training Course: Yield Optimization

Training Course code: EN235507 From: 13 - 17 April 2025 Venue: Sharm El-Sheikh (Egypt) - Sheraton Sharm Hotel
Training Course Fees: 4200 € Euro

Introduction

The Refinery Process Yields Optimisation training program is a comprehensive 5-day course meticulously designed by Global Horizon Training Center to provide in-depth knowledge and practical insights into the intricacies of refinery operations. This program is tailored to enhance participants' understanding of crude oil characteristics, refinery processes, product specifications, and the economic factors influencing refinery operations. Over the span of five days, participants will delve into various aspects of refining technology, with a strong emphasis on optimizing yields and improving process efficiency. Through expert-led sessions, case studies, and group discussions, attendees will gain valuable skills to contribute effectively to their organizations.

Objectives

By the end of this program, participants will be able to:

- Understand the origins, characteristics, and properties of crude oil and its impact on refining processes.
- Identify and analyze the key products derived from crude oil, including gasoline, kerosene, diesel, and petrochemical feedstocks.
- Gain a comprehensive understanding of refinery complexity and the interrelationship of various refining processes.
- Explore advanced petroleum refinery processes such as atmospheric and vacuum distillation, coking, and thermal processes.
- Master the processes involved in motor fuel production, including catalytic cracking, hydrocracking, and isomerization.
- Understand the supporting operations crucial to refining, such as blending, hydrogen production, and sulfur recovery.
- Evaluate the economic aspects of refinery operations, including cost estimation and residue reduction strategies.
- Apply knowledge through case studies and group discussions to real-world refinery scenarios.

Course Methodology

This course utilizes a blend of instructional methods to ensure a well-rounded learning experience. The methodology includes:

- Interactive Lectures: Expert-led sessions covering theoretical concepts and practical applications.

- Case Studies: Real-world examples to illustrate key principles and facilitate hands-on learning.
- Group Discussions: Collaborative discussions to enhance understanding and share experiences.
- Workshops: Focused activities designed to apply learned concepts to specific scenarios.
- Quizzes and Assessments: Regular evaluations to measure progress and understanding.
- Program Evaluation & Summary: A comprehensive review and assessment at the end of the course.

Organizational Impact

Upon completion of this training program, organizations can expect the following benefits:

- Enhanced Operational Efficiency: Employees will gain skills to optimize refinery processes, leading to better yields and reduced operational costs.
- Improved Product Quality: With a deep understanding of product specifications and refinery processes, participants can contribute to producing higher-quality fuels and petrochemicals.
- Strategic Decision-Making: The knowledge gained will empower participants to make informed decisions regarding refinery operations, technology adoption, and economic evaluations.
- Competitive Advantage: Organizations will benefit from a workforce that is well-versed in the latest refining technologies and processes, staying ahead in a competitive market.
- Sustainability Focus: By understanding residue reduction and sulfur recovery, participants can contribute to more environmentally friendly refining practices.

Target Audience

This training program is designed for:

- Refinery Engineers and Technologists: Seeking to deepen their knowledge of refinery processes and optimize yields.
- Process Engineers: Involved in the design, operation, and optimization of refinery processes.
- Operations Managers and Supervisors: Responsible for overseeing refinery operations and ensuring process efficiency.
- Petroleum and Chemical Engineers: Looking to enhance their understanding of refining technologies and economic aspects.
- Technical Professionals: Working in the oil and gas industry who want to broaden their expertise in refining processes.
- New Graduates in Engineering Disciplines: Who are entering the field of petroleum refining and seek foundational and advanced knowledge.

Outlines

DAY 1

Crude Oil Yields Refinery Technology

- Introduction
- Crude Oil Origins & Characteristics
- Crude oil Assay and properties
- Crude oil products
- Product specifications
- Gasoline
- Kerosene/ Jet Fuel
- Fuel Oil/ Diesel Fuels
- Petrochemical Feedstocks
- Refineries Complexity
- Overall refinery flow: Interrelationship of processes

DAY 2

Petroleum Refinery Processes

- Crude Processing
- Desalting
- Atmospheric distillation
- Vacuum distillation
- Heavy Oils Processing - Coking and Thermal Processes
- Delayed Coking
- Fluid Coking
- Flexicoking
- Visbreaking

- Case study - for example

DAY 3

Process for Motor Fuel Production

- Fluid catalytic cracking
- Hydrocracking
- Cat Cracking
- Isomerization
- Alkylation
- Hydrotreating
- Catalytic Reforming
- Case study - for example

DAY 4

Supporting Operations

- Blending for Product Specifications
- Hydrogen production
- Refinery Gas Plants
- Acid Gas Treating
- Sulfur Recovery Plants
- Case study - for example

DAY 5

Refinery Economics

- Residue Reduction
- Asphalt and Residual Fuel
- Cost Estimation
- Economic Evaluation



- Case Studies
- Group Discussions
- Program Evaluation & Summary

Registration form on the Training Course: Yield Optimization

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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 Position:
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Company Information

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Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
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Payment Method

- Please find enclosed a cheque made payable to Global Horizon
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