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# Course: Refinery Process Yields Optimisation

Code	City	hotel	Start	End	price	Language - Hours
129	Al Baha	Hotel Meeting	2025-11-23	2025-11-27	12450 SR	En - 25

## Introduction

This training programme will present a detailed overview of refining process yields, from the crude oil feed to the finished products.

Major refining processes are presented and discussed, including feedstock, feedstock preparation, operating conditions, catalysts, yields, product properties, and economics.

The program is oriented toward the practical aspects of refinery operations as well as the terminology and economics of refining.

## Objectives

- Act as a primer into the industry of Petroleum Refining to maximise process fluid yields
- Familiarize industry professionals with all processes associated with the processing of petroleum into finished products
- Equip new engineers into the industry, with the basic tools for understanding the complex nature of Refining and its operations

## Training Methodology

Process Yields is a hands on, stimulating learning experience. The programme will be highly interactive, with opportunities to advance your opinions and ideas. Participation is encouraged in a supportive environment.

To ensure the concepts introduced during the programme are understood, they will be



reinforced through a mix of learning methods, including lecture style presentation, open discussion, case studies, and group work.

Attendees will have the opportunity to develop personal competencies and build up expert knowledge of crude oil yield processes in a range of equipment.

## **SEMINAR OUTLINE**

### **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 – example

### **DAY 3 : Process for Motor Fuel Production**

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

### **DAY 4 : Supporting Operations**

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

### **DAY 5 : Refinery Economics**

- Residue Reduction
- Asphalt and Residual Fuel
- Cost Estimation
- Economic Evaluation
- Case Studies
- Group Discussions
- Program Evaluation & Summary



The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

### **Program Timings:**

- 9:00 AM to 2:00 PM

### **The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.