



**Petroleum, Oil & Gas**



**SCANDINAVIAN ACADEMY**  
Training and Development

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# Course: Refinery Process Yields Optimisation

Code	City	hotel	Start	End	price	Hours
129	Auckland (New Zealand)	Hotel Meeting Room	2024-06-10	2024-06-14	5450 €	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 employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

- **Theoretical Lectures:**
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- **Scientific Assessment:**
  - We evaluate trainees skills before and after the course to ensure their progress.
- **Brainstorming and Interaction:**
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- **Practical Cases:**
  - We provide practical cases that align with the scientific content and the participants specific needs.
- **Examinations:**
  - Tests are conducted at the end of the program to assess knowledge retention.
- **Educational Materials:**
  - We provide both printed and digital scientific and practical materials to participants.
- **Attendance and Final Result Reports:**
  - We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- **Professionals and Experts:**
  - The programs scientific content is prepared by the best professors and trainers in various fields.
- **Professional Completion Certificate:**
  - Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.
- **Program Timings:**
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.