TRAINING TITLE
PETROLEUM REFINERY PROCESSING

Training Duration
5 days

Training Venue and Dates

PE386	**Petroleum Refinery Processing**	**5**	**26-30 May 2025**	**$5,500**	**DUBAI, UAE**

In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees
- **$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate
Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION
This course offers a comprehensive overview of the various processes involved in petroleum refining, focusing on the conversion of crude oil into valuable products. Participants will learn about the key refining operations, such as distillation, cracking, reforming, and treatment processes, along with the principles, equipment, and technologies used in each. Emphasis will also be placed on safety, environmental considerations, and process optimization in a modern refinery setting.

TRAINING OBJECTIVES
By the end of this course, participants will be able to:
- Understand the fundamentals of petroleum refining and the various refining processes.
- Describe key refining units and their operations, including distillation, cracking, and reforming.
- Identify the different petroleum products produced and their uses.
- Apply knowledge of refining processes to optimize plant operations and improve efficiency.
- Understand safety and environmental considerations in petroleum refinery operations.

WHO SHOULD ATTEND?
- Engineers and technicians working in petroleum refining
- Process engineers and operators in the oil and gas industry

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- Refinery managers and production planners
- Students and professionals interested in petroleum refining technologies
- Environmental and safety specialists in the petroleum industry

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.
Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE PROGRAM:

Day 1: Introduction to Petroleum Refining

- Overview of the petroleum refining industry and its role in energy production
- The crude oil refining process: from crude to finished products
- Key refining products and their applications (gasoline, diesel, jet fuel, petrochemicals, etc.)
- Basic principles of petroleum refining and the flow of materials

Day 2: Distillation and Separation Processes

- Introduction to distillation and the distillation column
- Types of distillation units: atmospheric, vacuum, and crude distillation
- Principles of separation and fractionation in the refinery
- Distillation unit operations: feedstock, overheads, bottoms, and product recovery

Day 3: Conversion Processes: Cracking, Reforming, and Hydrotreating

- Introduction to catalytic cracking and fluidized catalytic cracking (FCC)
- Thermal cracking and its role in refining
- Reforming processes: catalytic reforming and its impact on octane rating
- Hydrocracking and hydrotreating processes for desulfurization and product upgrading

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- Principles of cracking, catalyst systems, and reaction mechanisms

Day 4: Treatment and Blending Processes

- Overview of refining treatments (hydrotreating, desulfurization, dewatering)
- Types of treatment units and their functions (hydrogenation, sweetening, etc.)
- Blending processes for gasoline, diesel, and other fuels
- Techniques for improving fuel quality (cetane, octane, sulfur content reduction)

Day 5: Safety, Environmental Considerations, and Process Optimization

- Safety regulations and standards in the petroleum refining industry
- Environmental impact of refining processes and emissions control
- Managing refinery waste: water treatment, air pollution, and solid waste disposal
- Process optimization in petroleum refining: energy efficiency, cost reduction, and performance monitoring
- Modern trends and technologies in petroleum refining (renewable fuels, cleaner technologies)

NOTE:
Pre-& Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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