

Petroleum Refining & Petrochemicals for Non-Technical Personnel

Date	(\$)Fees	
16 February -20 February 2025	3500	Register Now

Why Choose this Training Course?

This course examines the history and use of petroleum from exploration through to refining and then to petrochemicals. The technology used and the production operations of the oil industry are outlined and explained in a clear easy to understand language.

Designed for non-technical professionals who function within the Petroleum Refining & Petrochemicals industry, this course promises you an insight into chemical processes, plant operations, equipment and economics.

What are the Goals?

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

- Develop an appreciation and understanding of the origins of oil and gas
- Understand the basics of refining and petrochemicals
- Appreciate the basic differences between exploration, and refining and petrochemicals
- Identify the basics of the different building blocks of petrochemicals
- Examine the basics of different refinery types and complexity

Who is this Training Course for?

The course is specifically designed to be of substantial benefit to non-technical personnel within the Oil and Gas Industries.

- Non-technical professionals assigned to positions in refineries and petrochemical plants, corporate offices, suppliers and other interrelated companies.
- Support Personnel including Environmental professionals, Accountants, Business managers, Administrative and legal staff, Sales and marketing personnel, Insurance representatives, Personnel managers, Financial professionals and other professionals who desire a better understanding of subject matter.
- Newly-hired refinery plant personnel and current semi-technical personnel who require further training.

How will this Training Course be Presented?

This course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This includes:

- Lectures
- The use of PowerPoint presentations
- Short videos to reinforce specific points and relate the material to the real world
- Case studies and exercises that will be augment the course
- Discussions in a highly interactive programme that will offer and encourage the participants to advance their opinions and ideas

The Course Content

Day One: Origin and Nature of Petroleum

- Chemistry of fossil fuels
- Basic petroleum geology
- Origins, formation and trapping of oil & gas
- Exploration and production Methods
- Transportation
- Course Exercise - Estimation of Reserves

Day Two: Overview of Refining

- Classification of hydrocarbons
- Surface processing of oil and gas
- Refinery types and complexity
- Hydroskimming, Cracking and Coking Refineries
- Refining Margins and Profitability
- Course Exercise - Netback & Complexity Factors

Day Three: Refinery Process Operations

- Physical separation – Crude and Vacuum Distillation
- Chemical conversion processes, Gasoline Production
- Hydrotreating, Catalytic Reforming, Alkylation, and Isomerization
- Residue Reduction I: Cat Cracking, Hydrocracking, Visbreaking, Hydrocracking
- Residue Reduction II: Coking, Asphalt and Residual Fuel
- Course Exercise - Blending

Day Four: Petrochemicals I - Production and Uses

- Olefin based compounds
 - Ethylene
 - Propylene
 - Butadiene
 - Isobutylene
- Aromatic based compounds
 - Benzene

- Toluene
- Xylene

Day Five: Petrochemicals II - Production and Uses

- Natural Gas based compounds
 - Ammonia
 - Methanol
- Gas to liquid technologies
- Case study - Petrochemical production – Major Companies
- Course roundup and discussions



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