

€ TRAINING

Petroleum Industry From Upstream to
Downstream





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Introduction:

This training program provides comprehensive insights into the various stages of petroleum production, refining, and distribution. Participants gain a holistic understanding of upstream exploration and production techniques, midstream transportation and storage, as well as downstream refining and marketing processes.

Program Objectives:

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

- Identify key process operations related to the exploration & production of upstream industry feedstock.
- Analyze the key process operations related to refining and production of downstream products.
- Recognize the total spectrum of the oil and gas industry and the challenges faced.
- Develop skills to assist in the evaluation of corporate opportunities
- Understand the structure of the oil and gas business.

Targeted Audience:

- Technologists.
- Mechanical engineers.
- Safety and Inspection engineers.
- Operations, Maintenance, or project engineers.

Program Outlines:

Unit 1:

Origins of Petroleum:

- Origins of oil & gas.
- Petroleum chemistry.
- Petroleum geology.
- Exploration & production of petroleum.

- Types of Well.
- Development of Oil and gas fields.

Unit 2:

World Energy Markets:

- Pipeline geopolitics.
- OPEC Organization of the Petroleum Exporting Countries.
- EIA Energy Information Administration.
- Statistical review of petroleum consumption and supply.
- Distribution transmission and transportation.
- Tank farms and storage.

Unit 3:

Refinery Operations:

- Physical separation - Distillation
- Chemical conversion processes.
- Blending.
- Refinery Complexity.
- Refining margins.

Unit 4:

Gas Processing:

- Inlet separation, Dehydration/Dewpoint control.
- Contaminants & Pipeline Gas specifications.
- Amine Gas Sweetening.
- Physical Solvent Processes.
- Sulfur Recovery.
- Gas compression & Liquefaction.

Unit 5:

Oil and Gas Management:

- Cost estimation of oil and gas facilities.
- Pricing, Trading, Markets, Risk Management.
- Crude Benchmarks & price estimation.
- Derivatives - Futures, Options, and Swaps.
- Climate Change & Renewable Energy.
- Course Exercises, Evaluation, and roundup.