

# THE A TO Z OF OIL AND GAS TO PETROCHEMICALS

## Introduction

Crude Oil, a brown sticky liquid gets into most of the things we use daily. The clothes we wear, the bags we carry, packets for food in our fast food corner, the steering wheels of our cars, toothbrushes and what not. How does it happen? The course walks you through the various building blocks or steps by which the transformation takes place from Oil and Gas to Petrochemicals. Presentation is done with information packed colorful slides in Power Point.

The objective of the course is to give an idea of the total system of the value chain, starting from crude oil to fibers and plastics. It is useful for a business executive or a technical expert working in either upstream or downstream of the system, a perspective of how this industry is linked to the rest of the business in hydrocarbons. The course focuses on the practical aspects covering technology, economics and macro-system planning.

## Who should attend

1.	<b>Executives from Oil, Gas and Petrochemical Industries</b> , who want to get a total perspective of the industry from oil well to the petroleum refinery, petrochemical downstream and want to understand the opportunities it offers.
2.	<b>Managers, Corporate Executives and Finance Executives</b> , who want to get a macro-level view of all the processing steps, economics and business trends of upstream and downstream of their facilities.



## Course Content

No.	TOPIC	DESCRIPTION
1.	<b>Basic Definitions, Concepts and Terminologies</b>	<b>Definitions of Raw Materials</b> – What is Crude Oil? What is Natural Gas? What are LNG, LPG and NGL? Their types, properties and characteristics. <b>The Macro-system</b> - Oilfield to the Plastics and Fibers ... a bird's eye view <b>Exploring for Oil</b> – A quick look on methods and technologies.
2.	<b>Oilfield Processing</b>	<b>Oilfield Processing</b> – Why and How <b>Process Systems - Offshore and Onshore</b> - Gathering, Separation, Dehydration of oil and gas, Gas Sweetening, Compression, Pumping , Condensate Processing, Flare System <b>Offshore Production Systems</b> - Platforms and FPSO, Early Production Systems
3.	<b>Transportation</b>	<b>Transportation Aspects of Oil and Gas:</b> <ul style="list-style-type: none"> <li>♦ Trucks and Railcars</li> <li>♦ Marine Tankers- Oil and LNG</li> <li>♦ Pipeline</li> </ul> <b>Oil at Refinery Doorstep</b> – Sources and economics
4.	<b>Natural Gas Processing</b>	<b>Gas treating</b> – Sweetening, Dehydration <b>Recovery of LPG</b> <b>Petrochemical feedstock</b> - Recovery of Ethane and Propane <b>LNG</b> .- The LNG Cycle at macro level

No.	TOPIC	DESCRIPTION
5.	Refinery	<p><b>The Raw Material and Products</b> – Characteristics and Specifications</p> <p><b>Why Refining</b> – The objective of processing and significance of various process units.</p> <p><b>Basic Processes</b> – An Overview of Separation Process (Distillation), Residue Minimization (Cracking), Gasoline Octane Improvement (Reforming) and Trends on Sulfur Specification and related processing.</p> <p><b>Development of Refinery Configurations</b> – How it has developed and changed over the years. How the economics, environmental specifications and changing product specification changes the configuration.</p>
6.	Petrochemicals	How Crude Oil and Gas provide the raw materials and how they are converted to plastics, synthetic fibers and chemicals. A macro-level view of the petrochemical industry and important technologies.
7.	Costs, economics and industry perspective.	<p><b>Oilfield:</b> Crude oil and gas price trends, typical investments and operating costs, profit margins.</p> <p><b>Refinery Economics</b> – Why many refineries worldwide are closing down? How integrated operation increases profitability, current economic trends and factors affecting them.</p> <p><b>Petrochemicals:</b> Business Cycle and trends.</p>
8.	Technological aspects.	<b>Trends on Technology</b> - Key technology areas and current trends, open art processes and licensed processes.

### Methodology of presentation

- Microsoft Power Point colorful slides packed with information.
- Highly interactive with total involvement of the participants.
- Interesting and Interactive Quiz Sessions, group tasks for better assimilation.