

Course No.:	PPM 131
Course title:	<b>Oil &amp; Gas Business</b>
Number of credits:	2
Number of lectures-tutorial/case studies practicals:	28(26 -2-0)
Course Faculty:	Mr P K Agarwal

### **Introduction**

This course would cover the basics of Oil and Gas business. This would include basics of Exploration and Production, Refining, Marketing and Natural Gas. In addition, it would cover important aspects of oil and gas business such as pricing, international trading, risk management, storage and transportation, petroleum laws, liberalization, regulatory framework, emerging trends, challenges and outlook for petroleum industry.

### **Course Objectives**

The objective of the course is to familiarise the students with the entire value chain of the oil & gas industry.

### **Learning Objectives**

At the end of the course it is expected that the students will have the basic knowledge of the various aspects of the oil & gas industry including the challenges being faced.

### **Evaluation procedure**

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Minor Test	20%
Class room Participation	10%
Presentation	20%
Final Exam	50%

### **Details of course content and allotted time**

<b>Topics</b>	<b>Allotted time (hours)</b>	
	<b>Lectures</b>	<b>Tutorials</b>
Historical perspective of Petroleum Industry in India including de-regulation and overview of Global Petroleum Industry	3	

Basics of:		
▪ Exploration and Production	2	
▪ Refining including linkage to Petro-chemicals	2	
▪ Natural Gas sector	2	
▪ Marketing including Aviation/Marine/Lubes & Greases sales and MS/HSD retailing	2	
Storage and Transportation of Crude Oil, Petroleum Products	2	
<b>Topics</b>	<b>Allotted time (hours)</b>	
	<b>Lectures</b>	<b>Tutorials</b>
and Natural Gas and their relative economics		
Policies and Laws in Petroleum Sector	2	
Pricing of Crude Oil, Petroleum Products and Natural Gas (including taxation and subsidies) in India	2	
International trading of Crude Oil/ Petroleum Products/ Natural Gas and Risk Management	4	
Regulatory Framework in India:		
▪ Upstream		
▪ Downstream Petroleum & Natural Gas	3	
Emerging Trends, Challenges and environmental implication for Petroleum Industry in India	2	
Presentation on Current topics by students		2
<b>Total</b>	<b>26</b>	<b>2</b>

## Modules

### *Historical perspective of Petroleum Industry in India*

This module highlights the historical developments, structural changes and importance of the oil and gas industry in Indian context as well its position in the international markets.

### *Basics of Exploration and Production, Refining, Natural Gas sector and Marketing*

This module covers the 4 aspects viz basics of Exploration and Production, Refining, Natural Gas sector and Marketing. Basics of exploration and production cover discussion on formation of oil & gas and exploration & production process of oil and gas. Basics on refining cover discussion on fundamentals of refining and its process. Basics of natural gas sector cover the processing of natural gas, demand & supply scenario in Indian context as well as international markets and the pricing of natural gas. Basics of marketing cover the supply chain for the petroleum products and various marketing options for the same.

### *Storage and Transportation of Crude Oil, Petroleum Products and Natural Gas and their relative economics*

This module covers the basics of storage of crude oil and petroleum gas. It also covers the transportation of crude oil and petroleum products through various modes such as coastal/pipelines/ railways/road.

*Policies and Laws in Petroleum Sector*

This module covers the various policies governing the petroleum sector such as policies on foreign direct investment, marketing of petroleum products, new exploration and licensing policy etc. It also covers the salient features of various laws governing the petroleum sector.

*Pricing of Crude Oil, Petroleum Products and Natural Gas (including taxation and subsidies) in India*

This module covers the pricing of crude oil and petroleum products during Pre APM period, APM period, transition period and in the post APM period.

*International trading of Crude Oil/ Petroleum Products/ Natural Gas and Risk Management*

This module covers market structure for trading of crude oil, physical and paper trading of crude oil, key features of crude oil trading and oil price risk management

*Regulatory Framework in Upstream and Downstream sector*

This module covers the discussion on regulatory framework in upstream and downstream sectors of oil and gas industry. It also covers the environmental implications linked to oil and gas industry.

*Emerging Trends, Challenges and environmental implication for Petroleum Industry in India*

This module covers the trends and challenges in crude oil supply, refining and marketing business of oil and gas industry.

*Presentation on Current topics by students*

As part of this module group of students will make a presentation to the class on a topical issue in the Indian oil and gas industry so that all students gathers knowledge on the currents issues in the industry.

**Learning Outcomes:**

At the end of the course it is expected that the students will have the basic knowledge of the various aspects of the oil & gas industry including the challenges being face

**Field Visits:**

Field visits to Refinery, Petrol/Diesel Retail Outlet and CNG Outlet shall be planned as considered necessary.

## References

1. Petroleum Statistics by Ministry of Petroleum & Natural Gas
2. BP Statistical Review
3. Petroleum Refinery Process Economics by Robert E. Maples (PennWell Publication)
4. Encyclopaedia of Petroleum Laws by Harbans Lal Sarin (University Book Agency – Allahabad).
5. Regulations issued by Petroleum and Natural Gas Regulatory Board

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## The course is reviewed and commented by the following experts:

Mr P.S.Narayan

*Ecoeye, Social and Community Initiatives, Wipro*

Mr Brij Sethi

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