

**ESO Course Offered by PE Department (for Non PE students)**

Course Type	Course Code	Name of Course	L	T	P	Credit
ESO	NPEE201	Introduction to Petroleum Engineering	3	0	0	3

**Course Objective**

The objective of the course is to provide introductory knowledge related to the Indian Petroleum Energy scenario, oil and gas exploration and Oil field operations.

**Learning Outcomes**

Upon successful completion of this course, students will:  
 Understanding the basics concepts of the drilling of oil and gas wells.  
 Capabilities to have knowledge of reservoir rocks, reservoir fluids and their properties

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Introduction to petroleum exploration and Indian energy scenario	5	Understanding of national energy scenario
2	Energy security and global energy balance.	4	Knowledge of global energy balance
3	Classification of petroleum and petroleum products	4	Knowledge of petroleum and petroleum products.
4	Organization of oil filed and oil companies	4	Familiarity of oil field organizations
5	Layout of oil and gas fields.	4	Understanding of field lay out.
6	Basics of drilling systems of oil and gas wells.	5	Familiarity with the drilling system
7	Basics of reservoir rock properties	4	Elementary knowledge rock properties
8	Basics of reservoir Fluid properties	4	Basic knowledge of reservoir fluids
9	Basics of petroleum production operation	5	Elementary knowledge of oil and gas production
10	Alternate sources of energy	3	Need of alternate source of energy
<b>Total contact hours:</b>		<b>42</b>	

**Text Book:**

- i. Petroleum Engineering- Drilling and completion: Carl Gatlin **Reference Books:**
- Reference Book:
- ii. Petroleum Exploration and Exploitation Practices: Bhagwan Sahay