Course Type	Course Code	Name of Course	L	T	P	Credit
OE5	PEO404	Petroleum Resource Management and Project Evaluation	3	0	0	9

Course Objective
The objective of the course is to provide the basic knowledge of the utilization of the different available resources and their management.
Learning Outcomes
Exposure to the global sharing and evaluation of projects and assets of oil and gas industry. Exposure to justify the risk and their management.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	**Oil and gas Reserve Classification:** Petroleum Resources Definitions, Classification, and Categorization Guidelines. Technical Assessment Principles and Applications.	5	Student will learn about resource classification method used in industry for project management
2	**Petroleum fiscal regimes**: NELP & Help – Role, history & Background, Types of Contracts and fiscal Regimes, Economic analysis of different contracts. Crude Oil and natural gas contract in India, CBM Contracts	5	What are the different rules and regulation that governs the contract between different companies and government will be explained to student
3	**Project Evaluation Introduction**: HC project lifecycle. Financial aspects of an HC field.	5	Student will learn about different oil and gas field activity and their financial impact during and oil field life cycle.
4	**Petroleum Accounting introduction**: Balance and Income sheet, Asset, liability, capital and operating expenditure, Profit and loss statement, cash flow statement	6	The basic financial terminology in petroleum economics will be explained to student.
5	**Project Evaluation method**: Time value of money in capital investment, Depreciation & depletion definition and calculation method, amortization of oil projects, Financial measures and profitability analysis, Break-even and sensitivity analysis, Optimization Techniques.	5	Different method of evaluation of oil field project on the basic of economics will be explained to student.
6	**Project Evaluation method application**: Estimation of oil reserves and evaluation of an oil property. Economic evaluation of exploration and drilling operations: Optimization of number of wells, cost etc. Economic evaluation of production operation: Tubing size optimization, optimum production rate calculation. Economic evaluation of artificial lift operation Economic evaluation of Downstream Oil Activities: Pipe size selection and other examples etc.	10	Student will learn the oil filed project evaluation in upstream and mid-stream and downstream operation with different practical examples.
7	**Uncertainty and Risk Analysis**: source of risk, managing risks by risk reduction, diversification, and uncertainty investment and decision analysis by decision tree. Risk management in energy markets	6	What are the risk and what are different risk mitigation method will be explained to students.
	Total contact hours:	**42**	

Text Books:

i. Production and transport of oil and gas, Volume 3: A P Szilas
ii. Production and transport of oil and gas, Volume B : Gathering & Transportation (Developments in Petroleum Science) 2nd Edition: A P Szilas

Reference Books:

i. Petroleum Pipelines : A Handbook of Onshore and Gas Pipeline: Sanjoy Chanda
ii. Petroleum Marketing and Transportation : New Ideas, New Method, New Developments Gulf Publishing Company