

**Module-I**

Geological studies: – Structural contour maps and various geological models. Estimation of reserves. Hydrodynamic Study, Techno-economic Evaluation for normal and marginal fields. Innovative ways to asset development.

**Module-II**

Petroleum project evaluation-mineral project evaluation case studies. The design and evaluation of well drilling systems-Economic appraisal methods for oil field developmental project evaluation including risk analysis, probability and statistics in decision-making and evaluations. case studies.

**Module-III**

An integrated reservoir description in petroleum engineering-usage of geophysical, geological, petro physical and engineering data-emphasis on reservoir and well data analysis and interpretation, reservoir modeling (simulation), reservoir management (production optimization of oil and gas fields) and economic analysis (property evaluation)

**Module-IV**

An integrated reservoir development in petroleum engineering-reservoir and well evaluation production optimization-nodal analysis, stimulation, artificial lift facilities-surveillance. Evaluation of well completions-placement of casing, liners and well tubing. Evaluation, performance of horizontal wells. Evaluation of acidization treatments.

**Books:**

- Katz D.L.et al., Natural Gas Engineering (Production & storage), McGraw-Hill, Singapore.
- Standard Handbook of Petroleum and Natural Gas Engineering. 2nd Edition. William C Lyons, Gary C Plisga. Gulf Professional Publishing.
- Mc.Cray. A.W and Cole.F.W. 'Oil Well Drilling Technology' University of Oklahoma Press, Norman 1959.