

UCH844 PETROLEUM TECHNOLOGY

L	T	P	Cr
3	0	0	3.0

Introduction: World petroleum resources, Petroleum industry in India, Origin, Exploration, Drilling and production of petroleum crude, Transportation and pretreatment of crude oil.

Characterization: Composition and classification of petroleum crude, ASTM, TBP and EFV distillation of crude oil, Properties and specifications of petroleum products - LPG, gasoline, naphtha, kerosene, diesel oil, lubricating oil, wax etc.

Separation Processes: Pretreatment of crude, Crude distillation, Vacuum distillation, Gasoline treatment and operation of topping, Tube still furnaces, Solvent extraction processes for lubricating oil base stocks and for aromatics from naphtha and kerosene, dewaxing.

Conversion Processes: Thermal and catalytic cracking, Vis-breaking and coking processes, Reforming, Hydroprocessing, Alkylation, Polymerisation and isomerisation, Product finishing processes.

Text Books:

1. Bhaskar Rao, B. K., Modern Petroleum Refining Processes, Oxford and IBH (2007).
2. Nelson, W.L., Petroleum Refinery Engineering, McGraw Hill (1958).

Reference Books:

1. Gary, J.H. and Handwerk, G.E., Petroleum Refining, Technology, and Economics, Marcel Dekker (2001).
2. Kobe, K. A., and McKetta, J.J., Advances in Petroleum Chemistry and Refining, Wiley Interscience (1963).
3. Sarkar, G.N., Advanced Petroleum Refining, Khanna Publishers (2000).