
PETROCHEMICAL PRODUCTS
(Elective-III)

Course Code: 13CH2117

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Course Educational Objectives:

To understand industrial processes for producing most important and widely used petrochemical products.

Course Outcomes:

A student able to know the process of different petrochemical products obtained from petroleum refining industries.

UNIT-I

Past and present scenario in petro chemical industry in India and abroad. Introduction to petro chemical Industry in India.

UNIT-II

Chemicals from ethane-ethylene and acetylene: oxidation of ethane, Production of ethylene manufacture of vinyl chloride monomer, vinyl acetate manufacture, ethanol from ethylene, Acetylene manufacture acetaldehyde from acetylene.

UNIT-III

Petrochemical feed stocks, synthesis gas and hydrogen production and chemicals from synthesis gas. Chemicals from methane, F-T synthesis.

UNIT-IV

Aromatic production form petroleum. Benzene, Toluene, Xylene, Production and applications.

UNIT-V

Petrochemicals products polymers and polymerization processes, recent trends in production and use of polymers such as LDPE, HDPE.

TEXTBOOKS:

1. Baskara Rao B.K, "*Modern Petroleum Refining Processes*", 4th Edition, Oxford & IBH Pub. Co. Pvt.Ltd. 2002.
2. Baskara Rao B.K, "*A Text on Petrochemicals*", Khanna Publishers, 2002.

REFERENCES:

- 1.Nelson W.L, "*Petroleum Refinery Engineering*", McGraw Hill, New York, 1961.
2. Hengstebeck R.J, "*Petroleum Refining*", McGraw Hill, New York 1959.
3. Steiner H, Pergamon, "*Introduction to petroleum Chemical Industry*", London,1961.
4. Sern V.Y, Pergamon, "*Gas phase oxidation*", London, 1964.
5. Waddams A.L., "*Chemicals from Petroleum*", 4th Rev Ed, John Murray Pub. 1978.
6. KNIEL, WINTER & STOCK "*Ethylene Derivatives*", Marcell Dekker Publishers.
7. Sinha N K, "*Petroleum Refining and Petrochemical*", Umesh Pub. 2003.
8. Sharma B.K., "*Fuels and Petroleum Processing*", Goel Pub. House,1998.
