Chemical Technology - I - Video course

COURSE OUTLINE

Chemical process industries has been playing important role in the development of a country in order to meet the basic needs of mankind.

There has been continuous upgradation in technologies for improving the overall economy of the process.

The purpose of the chemical technology course is to improve knowledge of the chemical processes along with emphasis on recent technological development.

The aim of the course is to study process technologies, availability of raw materials, production trends, preparation of flow sheets, engineering and environmental problems of various chemical industries.

COURSE DETAIL

S.No	Topics	No. of Hours
1	Pulp and Paper: Raw materials, pulping processes, recovery of chemicals, stock preparation and paper making.	4
2	Coal Chemicals: Various processes for obtaining coal chemicals, coal tar distillation, F-T and Bergious processes for hydrocarbon production.	4
3	Petrochemicals: Manufacturing processes of formaldehyde, cetaldehyde, acetic acid, acetic anhydride, maleic anhydride, nitrobenzene, ethylene oxide, ethylene	6

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Chemical Engineering

Coordinators:

Dr. I.D.Mall
Department of Chemical EngineeringIIT Roorkee

	glycol.	
4	Pesticides : Processes for manufacturing of insecticides, fungicides and herbicides.	3
5	Fuel and Industrial Gases: Technology options of producing producer gas, syn gas, pyrogas, nitrogen, oxygen and carbon dioxide.	4
6	Sulphur Industries: Origin and extraction of sulphur, production routes of suphuric acid and oleum.	3
7	Phosphorous Industries : Manufacturing of phosphorus, phosphoric acid and phosphatic fertilizers.	3
8	Chlor-Alkali Industries : Production of common salt, caustic soda, chlorine, hydrochloric acid and soda ash.	4
9	Nitrogen Industries : Manufacturing of ammonia, nitric acid, nitrogenous and mixed fertilizers.	4
10	Petroleum Industry : Origin, occurrence and characteristics of crude oil, crude oil distillation and secondary processing.	3
11	Polymer and Synthetic Fibre : Introduction to polymerization, commodity polymers, rayon, polyester, polyamide, acrylic fibre and nylons.	4
	Total	42

References:

1. Gopala Rao M. and Marshall S; "Dryden's Outlines of Chemical Technology- for the 21st Century", Edited by Affiliated East-West Press.

2. Moulijn J. K; Makkee M. and van Diepen A; "Chemical Process Technology", Wiley.

3. Basta N; "Shreve's Chemical Process Industries Handbook", 5th Ed; McGraw Hill.