

Chemical Process Technology-02

- 1.1 Course Number: CH395
- 1.2 Contact Hours: 2-0-0 Credits: 06
- 1.3 Semester-offered: 3rd Year- odd
- 1.4 Prerequisite: Reaction Engineering, Mass, and Energy Balance, Fluid Flow Operations & Solid Fluid Mechanics & Mechanical Operations
- 1.5 Syllabus Committee Member: Dr. K. G. Biswas & Dr. Shweta

2. Objective:

To understand the maneuvers of various chemical industries and their method of production of various products.

To learn the various operations in any chemical industry is manufacture of a new product starting from an ore or other chemical raw materials.

3. Course Content:

Unit-wise distribution of content and number of lectures

Unit	Topics	Sub-topic	Lectures
1	Clay product and Refractories	Operations in Clay Product and Refractories industries	3
2	Vinyl Chloride, Styrene & Phenol	Vinyl Chloride from Ethylene, Phenol from Benzene, Production process of Styrene	4
3	Phthalic Anhydride & DDT	Phthalic Anhydride manufacturing process, Manufacture of DDT, and Maleic Anhydride	4
4	Fermentation Industries	Ethanol From Molasses, Alcohol from Biomass	4
5	Paint Industry	Operations in Paint Industries, Constituents of paints and its types	2
6	Soaps and Cement Industries	Manufacturing process of soaps and detergents, Manufacturing process of cement and its classifications, Industrial applications	4
7	Pharmaceutical Industries	Operations in pharmaceutical industries and applications	2
8	Heavy and fine chemical Industries, Glass Industries & Ceramic Industries	Various operations and products in heavy and fine chemical industries, glass industries, ceramic industries.	5
		Total	28

4. **Readings**

4.1 Textbook:

1. Outlines of Chemical Technology, Charles E. Dryden
2. Shreve's Chemical Process Industries, G.T. Shreve Austin

4.2 Reference books:

1. Riegel's Handbook of Industrial Chemistry, Edited by James A. Kent

5. **Outcome of the Course:**

Most of the Chemical Engineering graduates will be working in various chemical Industries so it is essential for them to have a comprehensive knowledge of different chemical industries existing and their mode of operation.