

CEPC3002 CHEMICAL PROCESS TECHNOLOGY (3-0-0)

Course Objective: The main objective of the course is to teach students about how various organic and inorganic chemicals are manufactured. Develop understanding of process flow diagrams and lacunae of various processes.

Module – I (08hrs)

Heavy Chemicals: Caustic Soda & Chlorine, HCL, Soda Ash, Sulphuric acid.

Module - II (10 hrs)

Extraction Refining of Oil, hydrogenation of Oil. Soap & synthetic detergents. Pulp & paper Industry. Technology of Pigment & dyes, Natural dyes.

Module - III (09hrs)

Manufacture of Sugar, Starch & its derivatives, Industrial & absolute alcohol.

Module - IV (09hrs)

Polymers: Polyethylene, Polypropylene, formaldehyde, Polystyrene, Poly vinyl acetate, Polylactic acid, and Nylons. PVC, Phenol formaldehyde, Urea.

Course Outcomes

On the completion of course students would

CO1: Understand the various manufacturing processes for the formation of various organic and inorganic chemicals

CO2: Comprehend about chemical reactions involved in the manufacturing process

CO3: Identify problems occurring in the manufacturing process

Books:

1. Dryden's Outlines of Chemical Technology for the 21st Century, 3rd ed. By CEDryden, Edited & revised by M Gopal Rao and MSittig.
2. Shreve's Chemical Process Industries, 5th ed. by G T Austin, McGraw-Hill.
3. Mall I. D., "Petrochemical Process Technology", Macmillan India Ltd., New Delhi. 2007
4. Kent J.A., "Riegel's Handbook of Industrial Chemistry," CBS Publishers. 1997