



Code	Subject Title	Cr. Hrs	Semester
CHEM-321	Applied Chemistry	4	VI
Year	Discipline		
3	Chemistry-I, II		

SYLLABUS OUTLINE:**1. Chemical unit processes:**

Elementary treatment of general unit Chemical unit processes, Nitration; Halogenation; Sulphonation; Hydration and Hydrogenation and Oxidation with real examples from Industry.

2. Industrial Organic Synthesis:

Raw materials; Chemical processes involved; flow sheet diagrams with all the important parameters concerned with the manufacturing of Oxalic acid; Phthalic anhydride; Acetic acid; Phenol; Ethyl Acetate; Butadiene and Styrene

3. Glass Industries:

History of glass, raw materials used for glass, methods of manufacturing, various types of furnaces and crucibles used for the manufacture of glass, special types of glass, their manufacture and properties.

4. Soap and Detergent Industries:

Processes involved in soap manufacturing, methods used for manufacture of laundry soap, typical soaps. Recovery of glycerine. Detergents or surface active agents, cationic, anionic and non-ionic agents.

RECOMMENDED BOOKS:

1. Shereve's Chemical Process Industries, 5th Ed.1975 by G.T.Austin, McGraw Hill Book Co. New York.
2. Industrial Organic Chemicals, by H.A.Witcoff and B.J.Reuben, John Wiley & Sons Inc. New York.
3. Riegel's handbook of Industrial Chemistry, Ed. J.A.Kent, CBS Publkhishers and Distributors, New Delhi.(1997).
4. Chemical Process Design, Robin Smith, McGraw Hill Book Co. New York.(1995).
5. Hand Book of Industrial Chemicals, by SIRI Board of Consultants and Engineers, Small Industries Research Institute, New Delhi (1995).
6. Chemistry of glass manufacturing, F.W.Hunter, Dower Publications, New York, 1950.
7. Industrial chemistry, B. K. Sharma, Krishna Prakashan Media (P) Ltd., Ed-15 (2006).