

Course Title: **Industrial Chemistry**

Course Code: CH-340

Credit Hours: 3-0

Pre-requisite: Nil

Course Outcomes

1. Students will acquire knowledge about the fundamentals of chemical industry, unit operations commonly used in industries, unit processes, flow sheet diagrams, commercial production of various chemicals, applications and Industrial waste management.

Text Books

2. G.T. Austin, Shreve's Chemical Process Industries, 5th Ed., McGraw Hill Book Company Inc. New York, 1984.

3. **Recommended Books**

a. G.N. Pandey, A Text Book of Chemical Technology, 2nd Ed., Vikas Publishing house, 2000.

b. E.R. Riegel, Industrial Chemistry, 5th Ed., Reinhold Publishing Corporation New York, 1997.

c. J.C. Kuriacase and J. Rajaran, Chemistry in Engineering and Technology, 2nd Ed., 1984.

d. Chuis A. Clauses III Guy Matison, Principles of Industrial Chemistry, 1978.

e. P.C. Jain, A Textbook of Applied Chemistry, 1993.

f. B.N. Chakrabarty, Industrial Chemistry, 1991.

g. H.L. White, Introduction to Industrial Chemistry, 1992.

Detailed Contents

4. **Fundamentals of Chemical Industry.** Basic principles and parameters for industrial plant location; Elementary treatment of general unit operations commonly used in industries such as size reduction; evaporation, filtration, distillation, crystallization and drying; Chemical unit processes like carbonation, sulfitation, defecation, nitration, etc. in chemical process industries.

5. **Basic and Heavy Chemical Industries.** Raw materials and chemicals; Flow sheet diagrams and commercial production of sulfuric acid, nitric acid, hydrochloric acid, caustic soda and washing soda; Applications of these chemicals in chemical industries. Industrial wastes and management.

Course Outcomes

6. At the end of the course, students will be able to understand the concept offundamentals of chemical industry, unit operations, unit processes, flow sheet diagrams, commercial production of various chemicals, applications and Industrial waste management.