

UG
Course Code: **CH310**
Credit: **3**
Version: **1**
Prerequisite Course: **Nil**

Department: **Chemical Engineering**
Course Name: **Chemical Technology**
L-T-P: **3-0-0**
Approved on:

Introduction to Chemical Engineering: Unit operations and unit processes, functions of a Chemical Engineer, new emerging areas.

Study of the following chemical industries/processes involving process details, production trends, thermodynamic considerations, material and energy balances, flow sheets, engineering problems pertaining to materials of construction, waste regeneration/recycling, and safety, environmental and energy conservation measures.

Industrial Gases: Hydrogen, producer gas and water gas.

Nitrogen Industries: Ammonia, nitric acid, nitrogenous and mixed fertilizers.

Chlor-Alkali Industries: Common salt, caustic soda, chlorine, hydrochloric acid, soda ash.

Sulphur Industries: Sulphuric acid, oleum.

Cement Industries: Portland cement.

Petrochemicals: Formaldehyde, ethylene oxide, ethylene glycol, acrylonitrile, styrene, butadiene.

Agrochemicals: Important pesticides, BHC, DDT, Malathion.

Alcohol Industries: Industrial alcohol, Absolute alcohol.

Oils and Fats: Oils, Fats and Waxes, Soaps and Detergents.

Pulp and Paper Industry

Books

1. Rao, M.G. and Sittig, M., "*Dryden's Outlines of Chemical Technology*", Affiliated East West Press, 1997.
2. Austin, G.T., "*Shreve's Chemical Process Industries*", 5th ed., McGraw-Hill, 1985.
3. Faith, W.L., Keyes, D.B. and Clark, R.L., "*Industrial Chemicals*", 4th Ed., John Wiley.
4. Kirk-Othmer Encyclopedia of Chemical Technology.