

## **CH407 PLANT DESIGN AND ECONOMICS**

**Credits: 4 (L = 4, P = 0)**

**(Pre-requisite: None)**

### **Course Details:**

#### **Concepts of project:**

Feasibility study; site selection; profitability analysis; economic design; criteria of capital cost estimation and control.

#### **Basic engineering:**

Process description and flow diagram; P & I diagram; plant layout; selection and equipment specification; utilities.

#### **Detail engineering:**

Specifications; drawing; code and standards; checking and incorporating vendor's information.

#### **Project management:**

Planning and scheduling; PERT and CPM procurement of equipment and materials; plant commissioning and start-up.

#### **Detail 5:**

Environment and safety consideration; EIA and SIA.

#### **Detail 6:**

Commercial and legal aspects- sources of funding statutory and regulatory authorities.

#### **Reference Books:**

**K.D. Timmerhaus Plant Design and Economics for Chemical engineers**

**McGraw-Hill, Inc.**

*Max. S. Peters*

**Chemical Engineering Plant Design:**

**McGraw-Hill**

*Vilbrandt F.C. and Dryden C.F.*