

Year & Sem: E2S2	Course Code:CH2204	Course Name: Process Equipment Design	No. of Credits: 4	L 2	T&PS 2	P 0
Unit-I: Introduction; development of flow diagrams from process description, material and energy balance, sizing of equipment, design preliminaries, design codes, MOC selection procedure, fabrication methods and testing methods Unit-II: Stresses in thin and thick walled shells, theories of failure, design of storage vessels. Design of pressure vessels Unit-III: Design of shell and tube heat exchangers Unit-IV: Design of single effect evaporator Unit -V: Design of distillation and absorption columns Unit-VI: Design of batch reactor, CSTR and PFR; Optimum pipe diameter References/Text Books: 1. Chemical Engineering: Vol.6, Coulson J.M. and Richardson J.F. Pergamon Press 1983 2. Process Equipment Design, M.V. Joshi 3. Process Equipment Design-Vessel Design: Brownell L.E., Wiley Eastern Ltd. 4. Introduction to Chemical Equipment Design-Mechanical Aspects: Bhattacharya B.C., CBS Publishers. Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations. Video Lectures (Web Links): 1. 2. Study Materials (Web Links): 1. 2. Problems & Solutions (Web Links): 1. 2. Assignments (Web Links): 1. 2.						