

Year & Sem: E1S1	Course Code:CH1101	Course Name: Chemical Process Calculations	No. of Credits: 4	L 2	T&PS 2	P 0
Unit-I & Unit-II: Basic concepts of Chemical process calculations – Dimensions, units and conversion, concepts on Temperature, Pressure and Concentration. Unit-III & Unit-IV: Material Balances – Introduction, Material Balances with and without chemical reactions, Recycle, Bypass, Purge and Industrial applications. Energy Balances – Introduction, Energy balances with and without chemical reactions, enthalpy changes. Unit-V: Basic Chemical Calculations - Ideal gas laws and its application. Unit-VI: Dalton law, Raoult's law, Henry's laws, solubility and Distribution coefficient, Heats of Solutions Humidity charts, their use and saturation. References/Text Books: 1. “Basic Principles and Calculations in Chemical Engineering”, David M Himmelblau and James B Riggs, 7th Edition, PHI. 2. “Chemical process principles Part-I, Material and Energy Balance” by O. A. Hougen, K. M. 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.						