

Year & Sem: E2S2	Course Code:CH2203	Course Name: Mass Transfer Operations II	No. of Credits: 4	L 2	T&PS 2	P 0
UNIT-1: Distillation – Flash Distillation, Simple Distillation, Batch distillation with and without reflux, Ponchon - Savarit and McCabe- Thiele analysis of binary distillation. UNIT-2: Adsorption and ion exchange : types and nature of adsorption, isotherm, stage wise and continuous adsorption; fixed, fluidized and moving beds; ion-exchange. UNIT-3: Liquid Extraction: Liquid equilibria, Equipment and Flow-sheets, Stagewise contact, Stage-type Extractors, Differential(continuous-contact Extractors). UNIT-4: Leaching: single and multistage operation, Unsteady State operation ,Steady State(continuous) operation,equipment for leaching, Methods of Calculation. UNIT-5: Crystallization: Millers theory, yield calculations, crystallizers. UNIT-6: Membrane processes: liquid & gas separation processes, micro-filtration, ultra-filtration, nano-filtration, reverse osmosis. References/Text Books: 1. Separation Process Principles”, J Seader and E J Henry. 2. Mass transfer operations by R.E. Treybal, 3rd ed. Mc Graw Hill.. 3. Diffusion: mass transfer in fluid system by E. L. Cussler. 4. Transport processes and unit operations by Christie J. Geankoplis 5. Principles of mass transfer and separation processes, B.K. Dutta, PHI, India 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.						