

1.	Title of the course	Fundamentals of Mass Transfer
2.	Course number	CH206L
3.	Structure of credits	2-1-0-3
4.	Offered to	UG
5.	New course/modification to	Modification To CH2206/12
6.	To be offered by	Department of Chemical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	Course Objective(s): To introduce diffusive and convective mass transfer, and concepts of equipment design for separation processes.	
10.	Course Content: Introduction to mass transfer; Molecular scale diffusion; Fick's law of diffusion; Estimation of diffusion coefficient in gases, liquids and solids; Diffusive and convective fluxes, Concentration profiles in steady and unsteady state mass transfer; Interphase mass transfer coefficients; Theories of mass transfer coefficient for gas-liquid systems, Sherwood number, correlations; Concept of equilibrium-stage and continuous contact equipment.	
11.	Textbook(s): 1. Cussler E L, <i>Diffusion: Mass Transfer in Fluid Systems</i> , 3rd Edition, Cambridge University Press (2009). 2. Treybal R E, <i>Mass Transfer Operations</i> , 3rd Edition, Tata McGraw Hill (2012).	
12.	Reference(s): 1. Dutta B K, <i>Principles of Mass Transfer and Separation Processes</i> , 2nd Edition, Prentice Hall India (2007). 2. Geankoplis C J, Hersel A A and Lepek D H, <i>Transport Processes and Separation Process Principles</i> , 5th Edition, Prentice Hall (2018). 3. Welty J, Wicks C E, Wilson R E and Rorrer G L, <i>Fundamentals of Momentum, Heat and Mass Transfer</i> , 5th Edition, Wiley India (2010).	