

## INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI

## भारतीय प्रौद्योगिकी संस्थान तिरुपति

Yerpedu-Venkatagiri Road, Yerpedu Post, Tirupati District, Andhra Pradesh - 517 619

1.	Title of the course	Fundamentals of Mass Transfer
2.	Course number	CH216L
3.	Structure of credits (L-T-P-C)	2-0-0-2
4.	New course/modification to	Modified with CH206L/FUNDAMENTALS OF MASS TRANSFER
5.	To be offered by	Chemical Engineering
6.	Prerequisite	None
7.	Course Objective(s): To introduce the concepts of diffusive and convective mass transfer	
8.	<b>Course Content:</b> Introduction to mass transfer; Diffusion; Fick's law; Diffusion coefficient in gases, liquids, and solids; Diffusive and convective fluxes, steady and unsteady diffusion; Convective mass transfer: Boundary layer theory, Dimensional analysis, correlations; Theories of mass transfer coefficient for gas-liquid systems; Interphase mass transfer	
9.	<b>Textbook(s):</b> 1. Welty J, Wicks C E, Wilson R E and Rorrer G L, Fundamentals of Momentum, Heat and Mass Transfer, 5th Edition, Wiley India (2010). 2. Dutta B K, Principles of Mass Transfer and Separation Processes, 2nd Edition, Prentice Hall India (2007).	
10.	Reference(s): 1. Treybal R E, Mass Transfer Operations, 3rd Edition, Tata McGraw Hill (2012). 2. Geankoplis C J, Hersel A A and Lepek D H, Transport Processes and Separation Process Principles, 5th Edition, Prentice Hall (2018). 3. Cussler E L, Diffusion: Mass Transfer in Fluid Systems, 3rd Edition, Cambridge University Press (2009). 4. Seader J D and Henley E J, Separation Process Principles, 2nd Edition, John Wiley & Sons (2006).	