

1.	Title of the course	Fluid and Particle Mechanics Laboratory
2.	Course number	CH202P
3.	Structure of credits	0-0-3-2
4.	Offered to	UG
5.	New course/modification to	Modification To CH2191/12
6.	To be offered by	Department of Chemical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	Course Objective(s): To perform experiments for applying the hydrodynamic principles in fluid and particle systems. To perform experiments for handling and characterization of particle systems.	
10.	Course Content: Reynolds experiment; Bernoulli's theorem verification; Impact of jets; Flow measurement devices; Losses in pipes and bends; Characteristics of centrifugal pump; Terminal settling velocity; Flow through packed and fluidized beds; Particle size reduction; Sieve analysis; Sedimentation; Filtration.	
11.	Textbook(s): 1. McCabe W L, Smith J C and Harriot P, <i>Unit Operations of Chemical Engineering</i> , 7th Edition, Tata McGraw Hill (2014). 2. Nevers N d, <i>Fluid Mechanics for Chemical Engineers</i> , 3rd Edition, Tata McGraw Hill (2011).	
12.	Reference(s): 1. Bird R B, Stewart W E and Lightfoot E N, <i>Transport Phenomena</i> , 2nd Edition, Wiley India (2006). 2. Chhabra R P and Basavraj M G, <i>Coulson and Richardson's Chemical Engineering: Particulate Systems and Particle Technology, Volume 2a</i> , 6th Edition, Butterworth-Heinemann (2019). 3. Darby R and Chhabra R P, <i>Chemical Engineering Fluid Mechanics</i> , 3rd Edition, CRC Press India (2016). 4. 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).	