

1.	Title of the course	Chemical Reaction Engineering Laboratory
2.	Course number	CH313P
3.	Structure of credits (L-T-P-C)	0-0-3-2
4.	New course/modification to	Modified with CH306P/REACTION ENGINEERING LABORATORY
5.	To be offered by	Chemical Engineering
6.	Proposed by	Narendra Singh
7.	Prerequisite	None
8.	Course Objective(s): To perform experiments and validate the principles of chemical kinetics, reactors and catalysis.	
9.	Course Content: Kinetics of liquid phase reactions in batch reactor; Performance of continuous stirred tank reactor (CSTR) and plug flow reactor (PFR); Residence time distribution studies in single tank, series of tanks, tube and packed bed; Kinetics of heterogeneous reactions; Performance of bioreactor.	
10.	Textbook(s): 1. Fogler S H, Elements of Chemical Reaction Engineering, 4th Edition, Prentice Hall India (2015). 2. Levenspiel O, Chemical Reaction Engineering, 3rd Edition, Wiley India (1999).	
11.	Reference(s): 1. Davis M E and Davis R J, Fundamentals of Chemical Reaction Engineering, McGraw Hill (2003). 2. Doraiswamy L K and Uner D, Chemical Reaction Engineering: Beyond the Fundamentals, CRC Press (2013). 3. Froment G F and Bischoff K B, Chemical Reactor Analysis and Design, 3rd Edition, John Wiley & Sons (2010). 4. Schmidt L D, The Engineering of Chemical Reactions, 2nd Edition, Oxford University Press (2005).	