1.	Title of the course	Process Design and Simulation Laboratory
2.	Course number	CH320P
3.	Structure of credits (L-T-P-C)	0-0-3-2
4.	New course/modification to	New
5.	To be offered by	Chemical Engineering
6.	Proposed by	Shamik Misra
7.	Prerequisite	None
8.	**Course Objective(s):** To introduce process simulators for equipment design, simulation of individual units and flowsheeting.	
9.	**Course Content:** Overview of process simulators; Property analysis and estimation; Simulation of unit operations including fluid handling devices, heat exchangers, separation equipment, reactors; Simulation of a flow sheet; Perform economic analysis; Perform detailed design of individual process units and simulation for the selected design problem.	
10.	**Textbook(s):** 1. Haydary J, Chemical Process Design and Simulation: Aspen Plus and Aspen Hysys Applications, Wiley (2019). 2. Sinnott R K and Towler G, Coulson and Richardson's Chemical Engineering: Chemical Engineering Design, Volume 6, 3rd Edition, Butterworth-Heinemann (2015).	
11.	**Reference(s):** 1. Schefflan R, Teach Yourself the Basics of Aspen Plus, John Wiley & Sons (2011). 2. Jana A K, Chemical Process Modelling and Computer Simulation, 3rd Edition, PHI Learning (2018).	