1.	Title of the course	Process Equipment Design
2.	Course number	CH308M
3.	Structure of credits	2-0-3-4
4.	Offered to	UG
5.	New course/modification to	Modification To CH3206/12
6.	To be offered by	Department of Chemical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To design equipment for various unit operations, and to use process simulators.	
10.	**Course Content:** Design of pressure vessel and vessel accessories; Piping design; Heat exchanger design: fouling, pressure drop, sizing; Design of distillation columns: selection of trays, packings, short-cut methods, pressure drop, tray spacing, column height and diameter; Design of absorber and other separation equipment; Design of catalytic and non-catalytic reactors; Engineering drawing of process equipment. **Laboratory:** Equipment design using process simulators.	
11.	**Textbook(s):** 1. Couper J R, Penny W R, Fair J R and Walas S M, *Chemical Process Equipment*, 3rd Edition, Butterworth-Heinemann (2010). 2. Sinnott R K and Towler G, *Coulson and Richardson's Chemical Engineering: Chemical Engineering Design, Volume 6*, 3rd Edition, Butterworth-Heinemann (2015).	
12.	**Reference(s):** 1. Bhattacharyya B C, *Introduction to Chemical Equipment Design*, 1st Edition, CBS Publishers & Distributors (2003). 2. Brownell L E and Young E H, *Process Equipment Design*, 1st Edition, Wiley India (2009). 3. Haydary J, *Chemical Process Design and Simulation: Aspen Plus and Aspen Hysys Applications*, 1st Edition, Wiley (2019). 4. Ludwig E E, *Applied Process Design for Chemical and Petrochemical Plants, Volume 1 & 2*, 3rd Edition, Gulf Professional Publishing (1999).	