

Course code	Course Name	L-T-P-Credits	Year of introduction
CH233	CHEMICAL TECHNOLOGY AND ENVIRONMENTAL ENGINEERING LAB	0-0-3-1	2016
Prerequisite: Nil			
Course objective			
To apply and demonstrate the concepts of Chemical Technology and Environmental engineering.			
List of Exercises / Experiments (Minimum 10 are mandatory)			
<ol style="list-style-type: none"> 1. Determine the Acid value of the given oil sample. 2. Determine the Iodine value of the given oil sample. 3. Determine the Saponification value of the given oil sample. 4. Determine the available chlorine in bleaching powder. 5. Preparation and analysis of soap. 6. Estimate the hardness of the given sample of water. 7. Estimate the dissolved oxygen in the given water sample. 8. Estimate the COD of the given water sample. 9. Estimate the BOD of the given water sample. 10. Estimate the total solids and dissolved solids content of the given waste water sample. 11. Determine the sucrose content in given sugar sample. 12. Determine the flash and fire point of the oil sample. 13. Analysis of oil and grease in waste water sample. 14. Determination of ammoniacal nitrogen. 15. Study of Equipments- Gas Chromatography, Flame photometer, Junkers Gas Calorimeter, Redwood viscometer, Digital pH meter, Spectrophotometer. 			
Expected outcome			
<ol style="list-style-type: none"> (i) Analyse and estimate parameters for the raw materials and products of selected industrial chemicals. (ii) Develop skills to use analytical and instrumental methods for measurement of parameters relevant to Chemical processing and environmental engineering (iii) Plan and perform experiments for the analysis (iii) Demonstrate capacity to work in teams and exhibit knowledge of safety, health and environment by practicing laboratory ethics. 			
Text books:			
References:			
<ul style="list-style-type: none"> • Vogels textbook of practical organic chemistry ELBS/Longman, 1989 • Standard Methods for the examination of water and waste water based on specified Codes. 			