ENGINEERING CHEMISTRY LAB
(Common to CE,ME)

Course Code	23BS1253	**Year**	I	**Semester**	II
Course Category	Basic Sciences	**Branch**	CE	**Course Type**	Lab
Credits	1	**L-T-P**	0-0-2	**Prerequisites**	NIL
Continuous Internal Evaluation:	**30**	**Semester End Evaluation**	**70**	**Total Marks:**	**100**

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	**Demonstrate** the viscosities of different oils. L3
CO2	**Prepare** advanced materials like polymers and nanomaterials.L3
CO3	**Calculate** the strength of a Pb-Acid battery and measure moisture in a coal sample.L4
CO4	**Analyze** the quality of a groundwater sample.L4
CO5	**Examine** the iron and calcium content in cement. L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations(3:High,2: Medium, 1:Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3													1
CO2	3													1
CO3		3												1
CO4		3												1
CO5		3												1

Syllabus		
Exp. No.	Contents	Mapped CO
Experiments		
1	Determination of Hardness of a groundwater sample.	**CO4**
2	Estimation of Dissolved Oxygen by Winkler's method	**CO4**
3	Determination of Strength of an acid in Pb-Acid battery	**CO3**
4	Preparation of a polymer (Bakelite)	**CO2**
5	Estimation of Calcium in port land Cement	**CO5**
6	Determination of percentage of Iron in Cement sample by colorimetry	**CO5**
7	Determination of percentage Moisture content in a coal sample	**CO3**
8	Determination of Viscosity of lubricating oil by Redwood Viscometer1	**CO1**
9	Determination of Viscosity of lubricating oil by Redwood Viscometer2	**CO1**
10	Preparation of Nano-materials by precipitation method.	**CO2**

Learning Resources
Reference: • "Vogel's Quantitative Chemical Analysis 6th Edition" Pearson Publications by J. Mendham, R.C. Denney, J.D. Barnes and B. Siva sankar