APPLIED CHEMISTRY LABORATORY

I B. TECH ISEM: ECE,EEE, IT, CSE, CSC, CSD, CSM, CSIT

Course Code:	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P	C	CIA	SEE	Total
A5BS12	BSC	0	0	3	1.5	30	70	100
Contact Classes: 0	Tutorial Classes: 0	Practical Classes: 39				Total Classes: 39		

Course Outcomes:

At the end of the course students will be able to:

1. **Estimate** hardness, alkalinity and chloride content in water to check its suitability for drinking.
2. **Estimate** the percentage content of metal oxide in construction material.
3. The measurement of physical properties like adsorption and viscosity.
4. **Demonstrate** the digital and instrumental methods of analysis
5. **Synthesiz**e various organic compounds.

LIST OF EXPERIMENTS

Experiment-1	Determination of total hardness of water by complexometric method using EDT
Experiment-2	Determination of Alkalinity of given water sample
Experiment-3	Estimation of Chloride content of water by Argentometry.
Experiment-4	Estimation of amount of HCl by Conductometry.
Experiment-5	Estimation of amount of Acetic acid by Conductometry..
Experiment-6	Estimation of amount of ferrous ion by potentiometry using potassium dichromat
Experiment-7	Estimation of HCl by potentiometry
Experiment-8	Determination of Viscosity of a given liquid using Ostwald's Viscometer
Experiment-9	Determination of surface tension of a given liquid using Stalagmometer
Experiment-10	Synthesis of Aspirin
Experiment-11	Synthesis of Thiokol Rubber
Experiment-12	Separation of organic mixture by Thin layer Chromatography and calculation of RF values.
Experiment-13	Determination of percentage of Calcium Oxide in Cement
Experiment-14	Estimation of Manganese Dioxide in Pyrolusite

Reference Books:

1. Senior practical physical chemistry, B. D. Khosla, A. Gulati and V. Garg (R. Chand and amp; Co., Delhi)
2. An introduction to practical chemistry, K. K. Sharma and D. S. Sharma (Vikas publishing, N. Delhi)
3. Vogel's textbook of practical organic chemistry 5th edition.
4. Text book on Experiments and calculations in Engineering chemistry- S. S. Dara.

Web References:

1. http://www.arxiv.org/pdf/1510.00032
2. http://www nptel.ac.in/courses/122103010/
3. http://www. researchgate.net/.../276417736_Video_Presentations_in_Engineering-Ph...
4. http://www. wileyindia.com/engineering-physics-theory-and-practical.html