I Year I Semester
17CH111

L	T	P	C
0	0	3	2

Applied/Engineering Chemistry Laboratory
(CE, EEE and ME)

1. Introduction to chemistry laboratory – Molarity, Normality, Primary, Secondary, standard solutions,volumetric titrations, quantitative analysis, qualitative analysis etc.
2. Trial Experiment – Determination of HCl using standard Na_2CO_3 solution.
3. Determination of $KMnO_4$ using standard oxalic acid solution.
4. Determination of Ferrous iron using standard $K_2Cr_2O_7$ solution.
5. Determination copper using standard $K_2Cr_2O_7$ solution.
6. Determination of alkalinity of a sample containing Na_2CO_3 and NaOH.
7. Determination of Total hardness of water sample using standard EDTA solution.
8. Determination of copper using standard EDTA solution.
9. Determination of pH of the given sample solution using pH meter.
10. Conductometric titration between strong acid and strong base.
11. Conductometric titration between strong acid and weak base.
12. Determination of zinc using standard EDTA solution.

Outcomes:

The students entering into the professional course have very little exposure to lab classes. The experiments introduce volumetric analysis, redox titrations with different indicators, EDTA titrations, then they are exposed to a few instrumental methods of chemical analysis. Thus at the end of the lab course, the student is exposed to different methods of chemical analysis and use of some common employed instruments. They thus acquire some experimental skills.

Reference Books:

1. A Textbook of Quantitative Analysis, Artthur J. Vogel.
2. Dr. Jyotsna Cherukuri (2012) Laboratory Manual of engineering chemistry-II, VGS Techno Series
3. Chemistry Practical Manual, Lorven Publications.
4. K. Mukkanti (2009) Practical Engineering Chemistry, B. S. Publications.