Chemistry Lab Details

Sl. No	Name of the Physical Lab	Area (in sq.mt)	Cost (in lacs)
1	Engineering Chemistry/Applied Chemistry Lab	259.99 sq.m	**1,74,163.17/-**

Individual Lab

Name of the Lab: **Engineering Chemistry/Applied Chemistry Lab**

Objective: The main objective of the Engineering/ Applied Chemistry Lab is to furnish the conceptual understanding of the basic principles of volumetric analysis involved. The course lays foundation of certain basic concepts and skills that can be repeatedly employed by the students in their future endeavours. Practical has been introduced with a view to develop scientific attitude among the students.

Sections Handled

I Semester(Applied Chemistry)

Electrical & Electronics Engineering (EEE)

Electronics & Communication Engineering (ECE), Computer Science & Engineering (CSE)

Information Technology(IT)

II Semester(Engineering Chemistry)

Civil Engineering (CE), Mechanical Engineering (ME)

Major Equipment Details:

S.NO	Name Of The Equipment/Make/	Asset Code	Qty	Total Cost (In INR)
1	Analytical Balance	DIET/BS&H/CHE/AB/01	1	2092.5
2	Cloud and Pour point apparatus	DIET/BS&H/CHE/CPP/01	1	2977
3	Micro processor based Conductivity and TDS meter	DIET/BS&H/CHE/CTM/01	1	21380.32
4	Digital Conductivity meter	DIET/BS&H/CHE/CM/01	1	10469.83
5	Digital pH meter	DIET/BS&H/CHE/PHM/01	1	5928
6	Digital pH meter	DIET/BS&H/CHE/PHM/02	1	10706.85

7	Digital Potentiometer	DIET/BS&H/CHE/PM/01	1	5637.66
8	Digital Electronic Balance	DIET/BS&H/CHE/EWM/03	1	34342
9	Photo electric Colorimeter	DIET/BS&H/CHE/PCM/01	1	11642.4
10	Micro controller Turbidity meter	DIET/BS&H/CHE/TM/01	1	18168.8
11	Water distillation unit	DIET/BS&H/CHE/WDU/01	1	37,149.94
12	Water bath	DIET/BS&H/CHE/EWB/01	1	6497.88
13	Water bath	DIET/BS&H/CHE/EWB/02	1	7169.99

TOTAL COST OF THE EQUPIMENT **1,74,163.17**

Faculty In charge with qualification:

D.Sri Laxmi, M.Sc,(Ph.D) (Lab Incharge)

D.Bhargavi, M.Sc,(Ph.D)

K. Prasanna Kumari, M.Sc

Lab Technical name with qualification:

M.Udaya Rani , Intermediate

Experiment list as per curriculum

Introduction to Chemistry laboratory – Molarity, normality, primary, secondary standard solutions, volumetric titrations, quantitative analysis

1. Determination of HCl using standard Na_2CO_3 solution.
2. Determination of alkalinity of a sample containing Na_2CO_3 and NaOH.
3. Determination of Mn (II) using standard oxalic acid solution.
4. Determination of ferrous iron using standard $K_2Cr_2O_7$ solution.
5. Determination of copper (II) using standard hypo solution.
6. Determination of temporary and permanent hardness of water using standard EDTA solution.
7. Determination of iron (III) by a colorimetric method.

8. Determination of the concentration of acetic acid using sodium hydroxide (pH-metry method).
9. Determination of the concentration of strong acid vs strong base (by conductometric method).
10. Determination of strong acid vs strong base (by potentiometric method).
11. Determination of Mg^{+2} present in an antacid.
12. Determination of $CaCO_3$ present in an egg shell.
13. Estimation of Vitamin C.
14. Determination of phosphoric content in soft drinks.
15. Adsorption of acetic acid by charcoal.
16. Preparation of nylon-6, 6 and Bakelite (demonstration only).

Experiment list beyond the curriculum

1. Determination of total dissolved solids present in the given water sample.
2. Determination of turbidity present in the given water sample