

BCHY101P	Engineering Chemistry Lab			L	T	P	C
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Pre-requisite	NIL			Syllabus version			
				1.0			
Course Objective							
To apply theoretical knowledge gained in the theory course and get hands-on experience of the topics.							
Course Outcome :							
At the end of the course the student will be able to							
1. Understand the importance and hands-on experience on analysis of metal ions by means of experiments.							
2. Get practical experience on synthesis and characterization of the organic molecules and nanomaterials in the laboratory.							
3. Apply their knowledge in thermodynamic functions, kinetics and molecular geometries through the experiments.							
Indicative Experiments							
1.	Thermodynamics functions from EMF measurements : Zinc – Copper system						
2.	Determination of reaction rate, order and molecularity of ethylacetate hydrolysis						
3.	Colorimetric estimation of Ni ²⁺ using conventional and smart phone digital-imaging methods						
4.	Laboratory scale preparation of important drug intermediate - para aminophenol for the synthesis for acetaminophen						
5.	Magnesium-sea water activated cell – Effect of salt concentration on voltage generation						
6.	Analysis of iron in an alloy sample by potentiometry						
7.	Preparation of tin oxide by sol- gel method and its characterization						
8.	Size dependent colour variation of Cu ₂ O nanoparticles by spectrophotometer						
9.	Determination of hardness of water sample by complexometric titration before and after ion-exchange process						
10.	Computational Optimization of molecular geometry using Avogadro software						
Total Laboratory Hours						30 hours	
Mode of assessment: Mode of assessment: Continuous assessment / FAT / Oral examination and others							
Recommended by Board of Studies				28.06.2021			
Approved by Academic Council				No. 63	Date	23.09.2021	