PHYSICAL CHEMISTRY (BS-ADP 5th Semester)

Module Code:	**Chem-303**
Module title:	**Physical Chemistry Lab**
Name of Scheme:	**BS-ADP 5th Semester**
Department:	**School of Chemistry**
Faculty:	**Science**
Module Type:	**Compulsory**
Module Rating:	**1 credit**

OBJECTIVES

The course will provide the practical grounds for the verification of fundamental principles of physical chemistry and applications of these principles. In addition it will enable the students to apply these practical methods in other branches of chemistry. Students will also learn the electrochemical measurements for determination of various physical constants like cell constant and dissociation constant etc. The course will be helpful for students to use conductometry in chemical analysis.

SYLLABUS OUTLINES

1. Preparation of standard molar and Normal solutions and percentage compositions of different substances.
2. Preparation of buffer solution (CH_3COOH and CH_3COONa) of a certain pH.
3. Determination of the equivalence conductance of solution of weak electrolyte at various dilutions at room temperature to verify Oswald's law.
4. Determination of the strength of given base by titrating it against standard Acetic acid solution and HCl solution using conductivity meter.
5. To determine the strength of HCl and CH_3COOH in the given mixture of both by titrating it against NaOH conductometrically.

RECOMMENDED BOOKS

1. Advanced Experimental Physical Chemistry by Ayodhya Sing.
2. Experimental Physical Chemistry by Daniel
3. Experimental Physical Chemistry by G.Peter Mattews.
4. Experiments in Physical Chemistry by Shoemaker.