ANALYTICAL CHEMISTRY (BS-ADP 7th Semester)

Module Code:	**Chem-422**
Module title:	**ElectroanalysisMethod-I**
Name of Scheme:	**BS-ADP 7th Semester**
Department:	**School of Chemistry**
Faculty:	**Science**
Module Type:	**Compulsory**
Module Rating:	**2 credits**

OBJECTIVES:

This course deals with the advanced chromatographic techniques like HPLC and GC. The students will learn about the instrumentation, applications and the sensitivities etc of these techniques. Furthermore, basic principle and applications of Potentiometry along with the various electrodes will be studied. The role of thermal methods in the analysis of various samples will be studied.

SYLLABUS OUTLINE:

1. Potentiometry:

Nernst equation; Electrode Potentials; different reference electrodes including glass and calomel electrode; working of a potentiometer and its applications including pH measurements and potentiometric titrations; ion-selective electrode systems; ion-exchange membrane electrode; gas-sensinig electrode; solid-state membrane electrode and bio membrane electrode.

2. Conductometry:

Conductance in Solutions; Specific conductance; molar conductance; factors upon which the conductance of solution depends; Measurement of conductance/Instrumentation; cell constant; Analytical applications of conductance measurement.

RECOMMENDED BOOKS:

1. Electro Analytical Chemistry by J.J. Longane, Inter Science Publisher Inc. N.Y. London.
2. Vogels, text book of Quantitative chemical analysis byJ.mendham, RCDenny, JDBarnes, MJ KTHomas, Pearson education Ltd.