ANALYTICAL CHEMISTRY (BS-ADP 7th Semester)

Module Code:	**Chem-426**
Module title:	**Advance Chromatography**
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. Gas Liquid Chromatography / Gas Solid Chromatography:

Gas Chromatographs, Derivative Formation, Gas Chromatographic Columns, Liquid Phases and Column Selection, Detectors for Gas Chromatography, Optimization of Experimental Condition, Gas-Solid Chromatography, Interfacing Gas Chromatography with Mass Spectrometry, Interfacing Gas Chromatography with Infrared Spectrometry,

2. High Performance Liquid Chromatography:

Optimization of Column Performance, Gradient Elution and Related Procedures, Derivation, HPLC Instrumentation, Mobile-Phase Delivery System, Sample Introduction, Separation Columns, Detectors, Interfacing HPLC with Mass Spectrometry, Instrumentation, detectors, sensitivity, precisian, sample types and qualitative and quantitative analysis.

RECOMMENDED BOOKS:

1. Electroanalytical chemistry by J.J. Longane, Inter Science Publisher Inc. N.Y. London..