ANALYTICAL CHEMISTRY (BS-ADP 6th Semester)

Module Code:	**Chem-328**
Module title:	**Separation Techniques**
Name of Scheme:	**BS-ADP 6th Semester**
Department:	**School of Chemistry**
Faculty:	**Science**
Module Type:	**Optional**
Module Rating:	**2 credits**

OBJECTIVES:

The course will enable the students to understand the use and mechanism of separation techniques (solvent extraction and electrophoresis) and their application in sample preparation.

SYLLABUS OUTLINE:

1. Solvent Extraction:

Basic principle of solvent extraction, The Distribution Coefficient, The Distribution Ratio, The Percent Extraction Ion, Solvent Extraction of Metals, Multiple Batch Extractions, Countercurrent Distribution

2. Solid-Phase Extraction:

Basic Principle, Mechanism of Separation, Sample Characteristics, Properties of Sorbents, Elution process, SPME

3. Electrophoresis:

Basic Principle, Types of Electrophoresis, Analytical Protocol, Application of Electrophoresis.

RECOMMENDED BOOKS:

1. Vogels, text book of Quantitative chemical analysis by J. Mendham, RCDenny, JDBarnes, MJ KTHomas, Pearson education Ltd.
2. Advances in electrophoresis by Andrea Chrmambach , Wiiley- VCH.
3. Solvent Extraction by Gorge H. & Morrison Hener, John Wiley and sons, London, N.Y.
4. Analytical Chemistry by G.D. Christian.