ANALYTICAL CHEMISTRY (BS-ADP 7th Semester)

Module Code:	**Chem-424**
Module title:	**Atomic Spectroscopy**
Name of Scheme:	**BS-ADP 7thSemester**
Department:	**School of Chemistry**
Faculty:	**Science**
Module Type:	**Compulsory**
Module Rating:	**2 credits**

OBJECTIVES:

In this course, the students ll be able to learn about Atomic emission, atomic absorption and atomic floresence spectroscopic techniques. Its application in advance analytical testing of organic and inorganic samples.

SYLLABUS OUTLINE:

1. Atomic Emission / Atomic Florescence Spectroscopy:

Basic principle of atomic emission spectroscopy; Source of atomization; Use of atomic spectra for detection and determination of elements; flame as a source of atomization and excitation; Instrumentation involved in FES; applications and limitations, Flame temperatures. Atomic Florescence Spectroscopy, Instrumentation, Applications, plasma sources and ICP-AES.

2. Atomic Absorption Spectroscopy:

Basic Principle of AAS; Flameless AA spectroscopy including graphite furnace and hydride generation.Interferences, Instrumentation and application and limitation.

RECOMMENDED BOOKS:

1. Chemical Application of Spectroscopy by West, Inter Science Publisher Inc. N.Y. London.
2. Kinetics in Analytical Chemistry by H.B. Mark Jr. & G.A. Rechnitz, Interscience N.Y. (1968).
3. Analytical Chemistry by Gary D. Christian, John Wiley and Sons (1977).
4. Automated Chemical Analysis by J.K. Forman Stockwell, John Wiley and Sons, N.Y. (1975).
5. Advances in Infrared Group Frequencies by L.J. Bellacy, Mathuen & Col. Amsterdam (1968).
6. Fundamentals of Molecular Spectroscopy by Banwell.