ANALYTICAL CHEMISTRY (BS-ADP 8th Semester)

Module Code:	**Chem-470**
Module title:	**Conducto/Oscillometry**
Name of Scheme:	**BS-ADP 8th Semester**
Department:	**School of Chemistry**
Faculty:	**Science**
Module Type:	**Compulsory**
Module Rating:	**2 credits**

OBJECTIVES:

This course in about the advanced spectroscopic techniques. The students will learn the advanced structural elucidation techniques. They will be able to determine the structure of various molecules on the basis of their NMR and mass spectrometric data. The use of laser spectroscopy for the purpose of analysis will also be studied in this course.

SYLLABUS OUTLINE:

1. **Laser Spectroscopy:**
   Principle of laser operation; Stimulated emission Population inversion, Single level and multi-level laser systems, Properties of laser light and its general and analytical applications; ruby laser, nitrogen laser, dye laser, Use of laser radiation in absorption and fluorescence spectroscopic methods.

2. **Molecular Luminescence Flourimetry and Phosphorimetry:**
   Theory of Fluorescence and phosphorescence, instruments for measuring Fluorescence and phosphorescence and photoluminescence methods, chemiluminescence

RECOMMENDED BOOKS:

1. Laser spectroscopy by Wolfgang Demtroder, springerlink.
2. Fundamentals of Molecular Spectroscopy by Banwell.