Code	Subject Title	Cr. Hrs	Semester
CHEM-408	**Inorganic Chemistry (Sp. Practical)**	**2**	**VII**
Year	Discipline		
4	**Chemistry**		

SYLLABUS OUTLINE:

1. **Use of organic reagents for the estimation of various metal ions;**
   (At least any four of the following):

   (a) 8-Hydroxyquinoline ($A1^{3+}$), Ti^{3+}), Fe^{3+})
   (b) Pyrogallol (Bi^{3+})
   (c) Nitron (NO_3^{1-})
   (d) Salicyladoxime (Ni^{2+} in presence of Cu^{2+})
   (e) Anthranilic acid (Cd^{2+}, Zn^{2+}, Co^{2+})

2. **Instrumental methods of analysis:**
   (a) Conductometry:
   i). Titration of HCl and acetic acid with a strong base.
   ii). Precipitation titration of $AgNO_3$
   iii). Determination of Ka for acetic acid.

   (b) Colorimetry:
   i). Micro determination of chromium by diphenyl Carbazide.
   ii). Determination of iron by 1, 10 Phenanthroline.
   iii). Determination of nickel by rubeanic acid

RECOMMENDED BOOKS:

1. Hand Book of Organic reagents in Inorganic Analysis by ZAVIX Holzbecher and other 1976 Ellis Hurwod Limited, London.
2. J. Bassett, R. C. Denny, G. H. Jeffery and J. Mendham, Vogel's Text Book of qualitative Inorganic Analysis, the English Language Book Society and Longman, New York, (2008)
3. Quantitative Analysis Chemistry, James S. Pritz, George H. Sehenk, 2001 Alby and Becon Inc. London.
4. Theory and practice of chromatography by Prof. Dr. Javed Iqbal (2002).
5. Instrumental analysis by Gary D. Christian and James E.O., Reilly, 2007, Allyn and bacon Inc., London.