

Approval: 8th Senate Meeting

Course Name: Inorganic Chemistry Lab

Course Number: CY506P

Credits: 4

Prerequisites: B.Sc. (with Chemistry) or Teachers Consent

Intended for: UG/PG

Distribution: Core for M.Sc. and Elective for UG

Semester: Odd/Even

Course Preamble: This course is intended to provide the MSc students with practical training on many synthetic, analytical and spectroscopic techniques in Inorganic Chemistry.

Course Outline:

Quantitative Analysis: Acid-base, Redox and complexometric titrations and their practical applications - Spectrophotometric analysis of metal ions.

Quantitative separation of metal ions from binary mixtures.

Qualitative Analysis: Reactions of some less common metal ions in a mixture of two.

Synthesis of inorganic complexes/organometallic compounds such as transition metal and main group acetylacetonate complexes, ferrocene derivatives etc. Their characterization using various analytical and spectroscopic techniques like IR, UV-vis, HR-MS, NMR, Magnetic susceptibility, and X-ray diffraction.

Reference Books:

1. Vogel's Textbook of Quantitative Chemical Analysis, 5th Edn, Orient Longman, 1989.
2. Vogel's Textbook of Macro and Semimicro Qualitative Inorganic Analysis, 5th Edn, Orient Longman, 1982.
3. Synthesis and Technique in Inorganic Chemistry, Robert J. Angelici, University Science Books, U.S.; 2nd edition, 1991.
4. Lab Manual and Instrument Manuals