



Inorganic Chemistry (2)

Course Code	Course Num.	Course Name	Credit Hours	Lec.	Lab.	Tut.	Prerequisites
CHM	212	Inorganic Chemistry (2)	4	2	3	1	CHM 211

Objectives:

- Understanding coordination compounds, their magnetic properties, theories regarding complexes geometries and their electronic configuration.
- Understanding ligands, their types and properties.
- Understanding the basic information about transition metals and analytical chemistry including methods of preparation, uses of elements and compounds.

Syllabus:

Introduction to the transition elements: electronic structures, Definition and general characterization of Transition Elements, Magnetic properties of chemical substances. Electron Spin Resonance. Nuclear magnetic resonance (nmr).

Coordination numbers and geometries: The Kepert model, Coordination numbers in the solid state. Structural isomerism.

The Electronic Structures of Transition Metal Complexes.

Valence bond theory, Crystal field theory. Jahn-Teller theorem. Molecular orbital theory.

d-Block metal chemistry.

Textbook

Inorganic Chemistry 4th Edition By Gary L. Miessle and Donald A. tarr. Publisher: Prentice Hall: March 4, 2010 ISBN-10:0136128661

References:

1. Advanced Inorganic Chemistry: A Comprehensive Text 3rd Edition By COTTON, FA, AND WILKINSON. Publisher: Inter science, New York. 1972.
2. Inorganic Chemistry 4th Edition By Gary L. Miessle and Donald A. tarr. Publisher: Prentice Hall: March 4, 2010 ISBN-10:0136128661
3. Advanced Inorganic Chemistry: A Comprehensive Text 3rd Edition By COTTON, FA, AND WILKINSON. Publisher: Inter science, New York. 1972.
4. Quantitative Chemical Analysis, 8th Edition By Daniel C., Harris. Publisher: W. H. Freeman; April 30, 2010 ISBN-10: 1429218150

