Course Specifications

General Information

Course name	Inorganic Chemistry(2)
Course number	CHEM2313
Faculty	
Department	
Course type	College Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Teach students the new field of coordination compound and its important applications.

2 - Teach the students properties of coordination complexes (conductivity , magnetism and spectroscopy).

3 - Teach student of reaction mechanism in square planar and octahedral complexes.

Intended Learning Outcomes

Knowledge and Understanding

* After completion this course the students should learn all basic aspects of the new field of coordination compounds.the nature of complexes, general properties , relation between geometry and coordination number.understand its reaction mechanisms.
* The students should understand the nature type of bonding and how it is change from one theory to another theory.
* The students should be learn and understand of the optical and magnetic properties of metal compounds and how they differ from other inorganic compounds.

Course Contents

1 - This course is concerned with coordination compounds, a back ground and Werners theory for coordination componds. Nomenclature of metal complexes. General properties such as molar conductivity

2 - This course includes all theories with respects of coordination chemistry (valence bond theory and its treatment for complexes, crystal field theory and its relation with geometries octahedral fields (strong and weak field) tetrahedral fields vs octahedral and molecular orbital theory treatment for sigma and bi bonding systems)

3 - This course is also covered topics in this concern e.g. octahedral field arrangement, tetrahedral field and square planar field, effects of crystal field splitting and crystal field splitting energy, tetragonal distortion (Jam-Teller effect) – magnetism spectrum in complexes.

Teaching and Learning Methods

1 - Lectures and Discussions

Teaching and Learning Methods for the Disabled Students

1 - none

Students Assessment

Assessment Method	TIME	MARKS
two med terms exams	4th and 8th weeks	2*25%
Final exam	end of semster	50%

Books and References

Essential books	Basic Concepts of Inorganic Chemistry, 2nd Edition by D. N. Singh Inorganic Chemistry: Principles of Structure and Reactivity, 4th ed. James E. Huheey, Ellen A. Keiter, and Richard 1. Keiter. Harper Collins: New York, 1993.