Course Specifications

Programme(s) on which the course is given M.Sc.Chemistry

Major or Minor element of programmes: Major

Department offering the programme: chemistry

Department offering the course: chemistry

Academic year / Level: 2012

Date of specification approval: 2012

A- Basic Information

Title: selective of inorganic chemistry Code: CH6212
Credit Hours: 2 Lecture: 2
Tutorial: 2 Practical:0 Total: 2

B- Professional Information

1 – Overall Aims of Course

This course will focus on the molecular structures and properties of inorganic complexes and compounds. We will study concepts in bonding, trends in periodic properties, molecular symmetry and its relationship to spectra, solid-state, reaction mechanisms, coordination chemistry, and descriptive chemistry of selected elements**2 – Intended Learning Outcomes of Course (ILOs)**

a- Knowledge and Understanding:

After completing the course the student should be able to

a1- show atomic structures
a2- clarify properties of atoms
a3- relate the atomic structure and its properties

b- Intellectual Skills

b1- Build the students capability for improvement and thinking in theoretical aspects of bonding theory
b2- Improvement the capability of students to out line the research in organometallic chemistry
b3- illustrate the aspects of coordination chemistry

c- Professional and Practical Skills

c1- show diagrams for molecular orbital theory
c2- compare molecular orbital theory and bonding theory
c3- illustrate the concepts of organometallic chemistry

d- **General and Transferable Skills**

d1- Enhancing the writing and oral communication capability
d2- problem solving

3- Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
Atomic Structure and Properties	4	4	-
Bonding Theory	4	4	-
Molecular Orbital Theory	4	4	-
Coordination Chemistry	4	4	-
Organometallic Chemistry	2	2	-

4– Teaching and Learning Methods

4.1- lectures
4.2 – practical for solving problems
4.3- discussion

5- Student Assessment Methods

5.1 written examination to assess the understanding and comprehension
5.2- practical exam to assess the performance and profisionalism

Assessment Schedule

Assessment 1 short exam (class activities) Week every two weeks
Assessment 2 mid-term (written and practical) Week 8
Assessment 3 final-term (written and practical) Week 13 and 14

Weighting of Assessments

Mid-Term Examination	20%
Final-term Examination	60%
Semester Work	20%
Total	100%

6- List of References

6.1- Course Notes
prepared in the form of book authorized by department

6.2-Text Book

Inorganic Chemistry, Miessler, G.L. and Tarr, D.A.**,** 3rd edition, Pearson Prentice Hall, Upper Saddle River, N.J., 2004.

7- Facilities Required for Teaching and Learning

Over head projector and data show

Course Coordinator: Ass.Prof. Hanaa El Boraay

Head of Department: Prof. Dr. Ahmed Abd El-meged

Date: 2012