Course Specifications

Programme(s) on which the course is given: B.SC.Chemistry
Major or Minor element of programmes: Major
Department offering the programmes: chemistry, chemistry & microbiology, chemistry & botany chemistry & zoology and chemistry & geology.
Department offering the course: chemistry
Academic year / Level: First
Date of specification approval: 2013

A- Basic Information

Title: Principles of inorganic chemistry
Code: CH122
Credit Hours: 2 h Lecture: 1.5
Tutorial: 1 Practical: 0.0 Total: 2 hours

B- Professional Information

1 – Overall Aims of Course:* introduce the basic principles of atomic structure and electronic configuration

*** introduce the basic principles of atomic spectra , geometrical shape of the molecule , bonding .**

2 – Intended Learning Outcomes of Course (ILOs)

a Knowledge and Understanding: After completing the course, the graduates should be able to

a1-recognize the atomic structure of any element
a2-predict the chemical bond in any molecule& Lewis theory
a3-know the shape of the molecule.

b Intellectual Skills: After completing the course, the graduate's knowledge improved to

b1- elucidate the atomic structure, bonding types and geometrical shape of the molecule .
b2- predict the relation between elements in their compounds,
b3-explain the theoretical reasons for formation of

inorganic molecules.

c-Professional and Practical Skills

c1-determine the structure of the atom and molecules by models

c2- Study the periodic table

d General and Transferable Skills

d1- use IT & web search engines for collecting information.

d2- work effectively both in a team , and independently on solving general and inorganic chemistry problems .

- 3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Atomic structure & atomic spectra	8	4	-
Chemical bonding, Lewis structure , hybridization of orbitals	10	5	-
Molecular geometry	10	5	-

4– Teaching and Learning Methods

4.1-lectures using data show & board.

4.2- problem classes and group tutorial

5- Graduate Assessment Methods

5.1 written exam to assess the understanding

5.2- oral exam to assess the performance

Assessment Schedule

Assessment 1 short exam (class activities) Week every two weeks

Assessment 2 mid-term (written) Week 8

Assessment 3 final-term (written)

Weighting of Assessments

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

6- List of References

<u>Recommended Books</u>

1-Basic Inorganic Chemistry, F. Albert Cotton and Geoffrey Wilkinson, John Wiley & Sons Inc, New York London Sydney Toronto

2- Modern approach to Inorganic Chemistry, C.F. Bell, M.A., D.Phil, F.R.I.C. and K.A.K. Lott, B.Sc., Ph.D.

7- Facilities Required for Teaching and Learning

Overhead projector

Course Coordinator: Dr. Sanaa Moustafa Ahmed Emam

Head of Department: Prof. Dr. Adel A. Nassar

Date: / /