CHEM 221 Syllabus

Course Code	Course Name	Credits	Prerequisite(S)	Classification
CHEM 221	Inorganic Chemistry-I	3	CHEM 202	Department Requirement

Course Description	This course covers the basics of inorganic chemistry planned for the students to learn about the chemistry of elements, their preparations, and applications. Also, it covers different basic bond theories of chemical bonding such as the molecular orbital theory, VSEPR theory to predict molecular geometry and electronic geometries. Furthermore, it also describes the basics of coordination chemistry, nomenclature and isomerism in coordination compounds.
Class Scheduling	Classes are held 2 times/week each for 80 minutes OR 3 times/week each for 50 minutes.
Textbook	1-Chemistry, R. Chang the Hill companie, Inc. (2010). 2-Inorganic Chemistry, Gary L. Miessler, Paul J Fischer and Donald A. Tarr, Pearson 2014. 5th ed.
Course Coordinator	Dr. Mehvash Zaki Dr. Maha Alhaddad Prof. Omar Alzain

Relationship to SOs

1	2	3	4	5	6
X		X		X	

CLOs

CLO1. Explicate the synthesis and applications of main block elements. (SO1)

CLO2. Differentiate the properties of the element by their chemical periodicity. (SO3)

CLO3. Draw the molecular geometry by using the Lewis structure theory. (SO3)

CLO4. Illustrate the basic concepts of coordination chemistry (nomenclature and isomerism). (SO3)

CLO5. Express the basic concepts, principles, and theories relating to the inorganic chemistry subject. (SO3)

CLO6. Search online and books for the assignment questions to find propriety answers. (SO5)

Contents

List of Topics	No. of Weeks
Properties of wave and atomic structure	2
Quantum numbers for an electron in an atom and chemical periodicity	2
Chemical bonding and Lewis structure	2
Molecular geometry and hybridization of atomic orbitals	2
Molecular orbital theory	2
Synthesis, properties, and applications of s and p block elements	3
Coordination chemistry, nomenclature, and isomerism.	2