توصيف مقرر دراسي

جامعة : المنصورة

كلية : العـــــلوم

قســم : الكيميـــاء

١- بيانات المقرر		
الرمز الكودى :Chem121	**أسم المقرر: اسس الكيمياء غير العضوية**	**المستوى: الأول**
التخصص: رياضيات	**عدد الوحدات الدراسية: ٣ ساعة معتمدة نظرى ٢: تمارين: ١ عملى: ٢**	

٢- هدف المقرر :	**For students undertaking this course, the aims are to:** 1 -Introduce the basic principles of general chemistry, chemistry calculations, atomic structure and electronic configuration 2 -Introduce the basic principles of atomic spectra, geometric shape of molecule, bonding, ionic equilibrium and their application..
٣- المستهدف من تدريس المقرر	
أ- المعلومات و المفاهيم :	**a- Knowledge and Understanding :** **On completing this course, students will be able to:** a1 - Understand the type of a compound and its structure a2- Recognise the atomic structure and type of bonding. a3-Know the shape of the molecule,chemical equilibria and conductance
ب- المهارات الذهنية :	**b- Intellectual Skills :** **On completing the course students will be able to:** b1 -Elucidate the bonding types, atomic structure, geometrical shape of the molecules. b2- Predict the polarity of the molecule and the conductance of different electrolytes. b3- Apply ionic equilibrium and its application.
ج- المهارات المهنية الخاصة بالمقرر :	**c-Professional and Practical Skills** **On completing the course students will be able to:** c1 -Identify the radical, basic or acidic c2 - Separate a mixture to its component.

c3 - Identify simple inorganic liquids..	
d-General and Transferable Skills **On completing the course students will be able to:** d1 -Use IT and web search engines for collecting information - d 2 - Work effectively both on a team , and independently on solving general and inorganic chemistry problems. d3 -Communicate effectively with his lecture and colleagues.	**د- المهارات العامة:**
1- Chemical calculations 2- Principles of wave mechanics- Electronic configuration of atoms. 3- Ionization potential. 4- Type of atomic bonds-Hybridization of orbital's 5- Resonance- Molecular polarity- Oxidation state. 6- Molecular geometry.	**٤- محتوى المقرر:**
1- Lecture using data show and board 2- Problem classes and group tutorial 3- Report and discussion groups 4- Laboratory assignment.	**٥- أساليب التعليم و التعلم**
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.	**٦- أساليب التعليم و التعلم للطلاب ذوى القدرات المحدودة**
	٧- تقويم الطلاب :
1 - Final examination to assess a1-a3,b1-b3 2 - Oral examination to assess a1-a3,b1-b3 3 - Practical examination to assess c1-c3 4 – Quizzes to assess a1-a3,b1-b3	**أ- الأساليب المستخدمة**
1 - Final examination week 15 2 - Oral examination week 15 3 - Practical examination week 13 4 – Quizzes week 4,8,**12**	**ب- التوقيت**

ج- توزيع الدرجات		Final-Term Examination	10%	
		Oral Examination	60 %	
		Practical Examination	20%	
		Mid-Term Exam	10%	
		Total	100%	

٨- قائمة الكتب الدراسية و المراجع :

أ- المذكرات	1 - General chemistry
ب- الكتب ملزمة	Chemistry, Raymond, 7th Ed., 2002 Concise inorganic chemistry, J.D. Lee, 1996. General Chemistry, by Linus Pauling, 1988
ج- كتب مقترحة	
د- دوريـــــات علميـــــة أو نشرات	1 - www.Elisevier. com/

(أ) مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسى

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Reactivity, Atomic and Molecular Weights	1	a1	b1		d1
Stoichiometry: Chemical Formulas and Equations: Empirical Formulas from Analyses, •Quantitative Information from Balanced Equations, Limiting Reactants, Solution Composition	2	a1	b1		d1
Electronic Structure of Atoms: The Wave Nature of Light, Bohr	3	a1-2	b1-2		d1
Quiz + Electronic Structure of Atoms: Electron Configurations	4	a1-2	b1-2		d1-2
Electronic Structure of Atoms: Development of the Periodic Table	5	a1-2	b1-2		d1-2
Periodic Properties of the Elements	6	a1-2	b1-2		d1-2
Basic Concepts of Chemical Bonding:Lewis Symbols and the Octet Rule	7	a1-2	b1-2		d1-2
Quiz + Drawing Lewis Structures, Resonance Structure, Exceptions to the Octet Rule	8	a1-3	b1-2		d1-2

Molecular Geometry and Bonding Theories: Molecular Geometries	9	a1-3	b1-3	c1-c4	d1-3
The VSEPR Model, Polarity of Molecules	10	a1-3	b1-3		d1-3
Hybrid Orbitals, Multiple Bonds	11	a1-3	b1-3		d1-3
Quiz + Molecular Orbital Theory	12	a1-3	b1-3		d1-3
practical	1-12			c1-c3	

أستاذ المادة : أ.د. عبد المنعم محمودعبيدو

رئيس مجلس القسم العلمي :ا.د/ سالم السيد سمرة