

# INORGANIC CHEMISTRY DESCRIPTION FORM

## نموذج وصف الكيمياء اللاعضوية

Module Information معلومات المادة الدراسية			
Module Title	Inorganic chemistry		Module Delivery
Module Type	Support		<ul style="list-style-type: none"> <li>• <input checked="" type="checkbox"/> Theory</li> <li>• <input checked="" type="checkbox"/> Lecture</li> <li>• <input checked="" type="checkbox"/> Lab</li> <li>• <input checked="" type="checkbox"/> Tutorial</li> <li>• <input type="checkbox"/> Practical</li> <li>• <input checked="" type="checkbox"/> Seminar</li> </ul>
Module Code	UOMU038024		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	1
Administering Department	Forensic science	College	
Module Leader	Asst.Lect. Ahmed-Mohammed Yousif	e-mail	
Module Leader's Acad. Title	Asst.Lect	Module Leader's Qualification	MS.c
Module Tutor	Name (if available)	e-mail	
Peer Reviewer Name		e-mail	E-mail
Scientific Committee ApprovalDate	08/06/2023	Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	



## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<b>Module Aims</b> أهداف المادة الدراسية	1- Atomic Theory, picturing atoms and elements, inside the atom, atomic number 2- General view to periodic table and atomic structure 3- energy revisited, concept of minimum energy 4- Groups 1 & 2, the Alkali Metals and the Alkaline Earth metals 5- Atoms, Molecules, Ions and ionic compounds 6- Chemical bonding ,how can atoms achieves lower-energy states
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	1. Teach students the principle of chemistry 2. Explain the atomic structures and its compounds 3. Explain some of chemical phenomena 4. Study the properties of some chemical elements 5. Practical and laboratory skills 6. Improvement skills, to improve student's mind and to let students think more about chemistry 7. Productive skills
<b>Indicative Contents</b> المحتويات الإرشادية	Indicative content includes the following. 1. Areas of inorganic chemistry 2. The current role of inorganic chemistry 3. Improve the student's mind by how he or she can deal with chemicals and its uses 4. Teach students about hazardous chemicals in the lab and how can avoid any risk in the lab

## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	<ul style="list-style-type: none"> <li>• In class interactive lectures involving educational videos</li> <li>• Practical in lab lectures</li> <li>• Adapting interactivity with student's interaction by raising a question and asking the group to find the relevant answers to them as a main way of teaching.</li> <li>• Power point presentation, examples from books and internet</li> </ul>
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## Student Workload (SWL)

### الحمل الدراسي للطلاب محسوب لـ 15 اسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطلاب خلال الفصل	102	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطلاب أسبوعا	4.2
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي الغير المنتظم للطلاب خلال الفصل	98	<b>Unstructured SWL (h/w)</b> الحمل الدراسي الغير المنتظم للطلاب أسبوعا	4

<b>Total SWL (h/sem)</b> الحمل الدراسي للطالب خلال الفصل	200
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<b>Module Evaluation</b> تقييم المادة الدراسية					
		<b>Time/Number</b>	<b>Weight (Marks)</b>	<b>Week Due</b>	<b>Relevant Learning Outcome</b>
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	<b>Assignments</b>	2	10% (10)	2,12	LO #3, 4, 6 and 7
	<b>Projects</b>				
	<b>Report</b>				
<b>Summative assessment</b>	<b>Midterm Exam</b>	2 hr	30% (10)	7	LO # 1-7
	<b>Final Exam</b>	2hr	50% (50)	16	All
<b>Total assessment</b>			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
Week 1-2	Elements and their invisible structures ,Atomic Theory Isotopes, mass number, charged atoms, Relative atomic mass, average atomic weight
Week 3-5	Periodic table ,periodic groups, elemental makeup Electronic structure of atom, energy revisited, concept of Minimum energy in the atom ,electron –configuration notation
Week 6-8	Quantum numbers ,evidence and uses of the electron energy levels Periodic table ,lewis electron dot structures ,periodic trends
Week 9-12	Chemical bonding ,how can atoms achieves lower-energy states Metals lose electrons ,nonmetals gain electrons Electron transfer ,ionic charges, polyatomic ions
Week 13-15	Formulas for ionic compounds ,the nature of the ionic bond ,why are there two types of compounds diatomic molecules The nature of the covalent bond lewis electron dot formulas, coordinate covalent bonds ,electronegativity and polarity, recognizing ionic versus molecular compounds ,law of definite composition revisited
Week 16	Preparatory week before the final Exam

## Learning and Teaching Resources

### مصادر التعلم والتدريس

	Text	Available in the Library ?
Required Texts	Inorganic chemistry, Sharpe, A. G. (Alan George), Harlow: Longman Scientific and Technical, 3 <sup>rd</sup> Edition 1992	Yes
Recommended Texts	Basic Inorganic Chemistry F. Albert Cotton, Geoffrey Wilkinson, Paul L. Gaus, , 3rd Edition, 1995	Yes
Websites	<a href="https://courses.lumenlearning.com/boundless-chemistry/chapter/the-structure-of-the-atom/">https://courses.lumenlearning.com/boundless-chemistry/chapter/the-structure-of-the-atom/</a> <a href="https://www.acs.org/content/acs/en/careers/chemical-sciences/areas/inorganic-chemistry.html">https://www.acs.org/content/acs/en/careers/chemical-sciences/areas/inorganic-chemistry.html</a>	

