كسلية: العلوم

قسم / الكيمياء

## توصیف مقرر دراسی

		١ -بيانات المقرر
المستوى: الثالث	أسم المقرر : Chemistry of Transition Metals, d-Block elements	الرمز الكود:ك٢١١
ن: - عملی: ٣	عدد الوحدات الدراسية: ٣ نظرى : ٢ تماريا	البرنامج: الكيمياء

Introduce the basic concepts of chemical bonding and symmetry. Study of the symmetry elements and operations. Study the general properties of transition metals in terms of electronic configuration.  - Knowledge and Understanding:  On completing this course, students will be able to:  a1- list the different symmetry elements and operations.  a2- describe the nature of chemical bonding.  a3- explain the general properties of transition metals.  b- Intellectual Skills: On completing this course, students will be able to:  b1- outline a suitable method to prepare transition metal compounds.  b2- suggest the general properties of a transition metal from its electronic configuration.  b3- predict the symmetry of a molecule from chemical calculations of ionic radii.  c-Professional and Practical Skills: On completing this course, students will be able to:	For students undertaking this course, the aims are to:	۲۔ هدف المقر ر
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1 - lectures using data 2 - solving problem an					- اساليب التعليم والتعلم:
3 - home works , repo	rts and discussions				
The same as norr		,			
in the Faculty of S	Science.			: •	التعليم والتعلم الطلاب ذوى القدرات المحدود ة:
in the Faculty of S  7- Student Assess				: 4	والتعلم للطلاب ذوى القدرات المحدود ة:
7- Student Assess Final exam	to assess	a1-a3, b1-b3,c	c1,d1	: •	والتعلم للطلاب ذوى القدرات المحدود ة: أ- تقويم الطلاب
7- Student Assess	sment Methods	a1-a3, b1-b3, da1-a3, b1-b3	c1,d1	: •	والتعلم للطلاب ذوى القدرات المحدود ة: أ- تقويم الطلاب
7- Student Assess Final exam Oral exam	to assess	a1-a3, b1-b3	c1,d1	: •	والتعلم للطلاب ذوى القدرات المحدود ة: أ- تقويم الطلاب
7- Student Assess Final exam Oral exam Mid-term exam practical exam	to assess to assess To assess To assess	a1-a3, b1-b3	c1,d1		والتعلم للطلاب ذوى القدرات المحدود ة: أ- تقويم الطلاب
7- Student Assess Final exam Oral exam Mid-term exam practical exam Assessment Sche	to assess to assess To assess To assess	a1-a3, b1-b3	c1,d1 Week 14		والتعلم نطلاب ذوى القدرات ة: أ- تقويم الطلاب الأساليب

Assessment 3	Week #mid-term exam Week practical exam		Week 4,8,12		
Assessment 4			Week 12		
Weighting of A	Assessments				ج- توزيع
Final-Term Exa		60%			الدرجات:
Oral Examinat	ion	10%			
Practical Exam	nination	20%			
Semester work		0%			
Mid-term exam	nination	10%			
Other types of	assessment	0%			
Total		100%			
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Inorganic Chemistry,	3 <sup>rd</sup> Year Chemistr	У			أ- مذكرات:
					ب- كتب
					ملزمة
Inorganic Chemistry,	Duward Shriver, F	Peter Atkins, Oxfo	rd University Press; Fi	fth Edition	ج- كتب مقترحة :
edition (2009)					مسرعه.
Concise Inorganic Ch	emistry, J.D. Lee, (	Chapman & Hall, :	1996		
http://www.d.umn.e	du/~pkiprof/Cher	nWebV2/index2.h	<u>ntml</u>		د- دوریات
					علمية أو
					نشرات.

## مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسى

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنیة	مهارات عامة	
Nature of chemical bonding and symmetry:						
<ul> <li>Bonding and structure- transitions between the main types of bonding structures of ionic crystals</li> </ul>	1-4	a1,a2	b3		d1	

Chemical calculations of ionic radii	5-8	a1,a2	b3	c1		
<ul> <li>Symmetry elements and operations - definitions and descriptions of symmetry elements and operations</li> </ul>	9-13	a1,a2	b3	c1	d1	
The Chemistry of Transition Metals (d-Block elements):						
<ul> <li>General properties of titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper and zinc groups in terms of electronic configuration</li> </ul>	1-6	a3	b1,b2	c1		
<ul> <li>Oxidation states and chemical properties of the elements and their compounds</li> </ul>	7-13	a3	b1,b2	c1		

أستاذ المادة: أ.د./محسن محمود مصطفى عبد الرحمن

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