كسلية: العلوم

قسم / الكيمياء

## توصیف مقرر دراسی

		١ -بيانات المقرر
المستوى: الثالث	أسم المقرر: Heterocyclic chemistry	الرمز الكود: ٣٣١
تمارین: - عملی: ۳	عدد الوحدات الدراسية: ٣ نظرى : ٢ ن	البرنامج: الكيمياء

For students undertaking this course, the aims are to:	۲ـ هدف المقرر				
<ul> <li>Introduce the basic concepts of heterocyclic chemistry.</li> </ul>	:				
<ul> <li>Enable the students to investigate the reaction mechanism.</li> </ul>					
Introduce the nomenclature rules and the preparation methods of simple					
heterocyclic compounds with one, two or more hetero atoms.					
Study the principle chemical reactions of heterocyclic compounds.					
<ul> <li>Investigate the physical properties of the main heterocyclic compounds.</li> </ul>					
<ul> <li>Acquiring the student the methods of quantitative analysis (estimation)</li> </ul>					
practically of organic compounds.					
Acquire students the IT, communication and group work skills.					
، من التدريس المقرر :	۳- المستهد <u>ف</u>				
a- Knowledge and Understanding:	(_   1112. 12.				
	المعلومات				
On completing this course, students will be able to:	والمعاميم:				
a1- mention the different classes of heterocyclic compounds.					
b- Intellectual Skills: On completing this course, students will be					
able to:					
	الذهنية الذهنية				
b1- suggest an appropriate mechanism for a reaction.					
b2- predict products of a hypothetical reaction.					
b3- apply a suitable preparation method to prepare a required heterocyclic compound.					
c-Professional and Practical Skills: On completing this course,	<del>                                     </del>				
	ج-				
students will be able to:	ج- المهارات المهنية				
students will be able to: c1- estimate practically the concentration and purity % of organic compounds.	ج- المهارات المهنية الخاصة				

c2- estimate the sa	ponification value	of different fats and oils.	بالمقرر:
c3- prepare simple	organic compoun	ds considering scientific ethics.	
d-General and Transferable Skills: On completing this course, students will be able to:			
d1- Use IT and web	search engines fo	or collecting information.	
d2- Work effective	ly both in a team,	and independently.	
d3- Collaborate an	d communicate wi	ith others effectively.	
<ul><li>Three men</li><li>Five mem</li><li>Fused ring</li><li>Six memb</li><li>Benzoana</li></ul>	bered rings with g systems involvi	h one and two heteroatoms one and two heteroatoms or more ng pyrrole, furan and thiophene one and two heteroatoms or more se	٤- محتوى المقرر:
5.1 - Lectures using data show and board			
5.2 - Problem classes and group tutorial			التعليم والتعلم:
5.3 - Reports and	discussion groups		
5.4 - Laboratory w	ork and assignme	nt	
The same as no in the Faculty		s, only skeletal disabilities are allowed	<ul> <li>٦- أساليب</li> <li>التعليم</li> <li>للطلاب</li> <li>ذوى</li> <li>القدرات</li> <li>المحدود</li> <li>ة:</li> </ul>
		: •	٧- تقويم الطلاب
7- Student Assessment Methods			أ- الأساليب المستخدمة:
Final exam	to assess	a1,b1-b3	
Oral exam	to assess	a1, b1-b3	
Mid-term	To assess	a1, b1-b3	

exam						
Practical	to assess	<u> </u>	c1-c3,d2,d3			
exam						
Assessment Sc	hedule		I			٠- التوقيت :
Assessment 1	,	Week	#final exam	Week 14		
Assessment 2	1	Week	#oral exam	Week 14		
Assessment 3		Week exam	#mid-term	Week 4,8,1	2	
Assessment 4		Week exam	# Practical	Week 12		
Weighting of	Assessme	nts				ه- توزیع
Final-Term Exa	amination		60%			درجات:
Oral Examina	ation		10%			
Practical Exa	mination		20%			
Semester wor	'k		5%			
Mid-term examination		5%				
Other types o	f assessme	ent	0%			
Total			100%			
				:	<u> </u> لدراسية والمراجع	 /- قائمة الكتب ا
Fundamentals of He	eterocyclic Co	ompoun	d			- مذكرات:
						،۔ کتب لزمة
Advanced Organic (	Chemistry, Je	rry-Mar	ch,			ه- کتب قترحة :
Fessenden & Fesser Massachusetts, 2nd	_		stry, Willard Gran	t Press, Boston,		قترحة:

http://en.wikipedia.org/wiki/Organic_chemistry	د- دوریات
http://www.casaria.ch.casista.cas/	علمية أو
http://www.organic-chemistry.org/	نشرات <u>.</u>
http://www.acdlabs.com/iupac/nomenclature/	
Electronic Courses:	
http://www.mans.edu.eg/facscim/english/courses/chemistry/PhysicalOrganic	
http://mansvu.mans.edu.eg/moodle/course/category.php?id=94	

## مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسى

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنیة	مهارات مهنیة	مهارات عامة
Introduction - nomenclature	1-2	a1	b2,b3		
<ul> <li>Three membered rings with one and two heteroatoms</li> </ul>	3	a1	b2,b3		
<ul> <li>Five membered rings with one and two heteroatoms or more</li> </ul>	4-6	a1	b2,b3		d1
<ul> <li>Fused ring systems involving pyrrole, furan and thiophene</li> </ul>	7-8	a1	b2,b3		d1
<ul> <li>Six membered rings with one and two heteroatoms or more</li> </ul>	9-11	a1	b2,b3		d1
Benzoanalogues of pyridine	12-13	a1	b2,b3		d1
Practical: Estimation – Preparation.	2-11			c1,c2,c3	d2,d3

أستاذ المادة: أ.د./محمد عباس محمد المتولى

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