

جامعة : المنصورة

كلية : العلوم

قسم / الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الرمز الكود : ك ٣٥٤	اسم المقرر: Organic synthesis-2	المستوى : الرابع
البرنامج : الكيمياء	عدد الوحدات الدراسية: ٣ نظري : ٢ تمارين: ٠ عملي: ٣	

٢- هدف المقرر:		For students undertaking this course, the aims are to:
٣- المستهدف من التدريس المقرر:		1 - Retrosynthetic analysis. Creative chemistry. Synthesis backwards and disconnections.
أ-المعلومات والمفاهيم:	a- Knowledge and Understanding : On completing this course, students will be able to: a - 1 - On completing this course, students will be able to know the different types of disconnections and different classes of reagents. a - 2 - On completing this course, students will be able to list the most common types of retrosynthesis. a - 3 - On completing this course, students will be able to recognize the different classes of synthons, C-C disconnections, umpolung and chiral centers.	
	b- Intellectual Skills: On completing this course, students will be able to: b - 1- On completing this course, students will be able to suggest an appropriate disconnection for a reaction. b -2 - On completing this course, students will be able to predict products of a hypothetical reaction. b -3 - On completing this course, students will be able to apply a suitable preparation method to prepare a required target compound.	
ب-المهارات الذهنية	c-Professional and Practical Skills: On completing this course, students will be able to: c - 1 - On completing this course, students will be able to estimate practically	
ج- المهارات المهنية الخاصة بالمقرر:		

<p>the concentration and purity % of organic compounds.</p> <p>c -2 - On completing this course, students will be able suggest a reasonable disconnection.</p> <p>c -3 - On completing this course, students will be able to prepare organic compounds.</p>	
<p>d-General and Transferable Skills: On completing this course, students will be able to:</p> <p>d - 1 - On completing this course, students will be able to use IT and web search engines for collecting information.</p> <p>d -2 - On completing this course, students will be able to work effectively both in a team, and independently on solving organic chemistry problems. d -3 - On completing this course, students will be able to communicate effectively with their lecturer and colleagues.</p>	د- المهارات العامة :
<p>1- Retrosynthetic analysis: creative chemistry, synthesis backwards.</p> <p>2- Disconnection must correspond to know, reliable reactions.</p> <p>3- Synthons are idealized reagents, choosing a disconnection, multiple step syntheses.</p> <p>4- Functional group interconversion, two-group disconnections.</p> <p>5- Donner and acceptor synthons, 1,5-related function groups..</p> <p>6- Natural reactivity and umpolung.</p> <p>7- Resolution can be used to separate entatiomers.</p> <p>8- Asymmetric synthesis, chiral reagents and chiral catalysts.</p>	٤- محتوى المقرر:
<p>1 - Lectures using data show and board.</p> <p>2 - Problem classes and group tutorial.</p> <p>3 - Reports and discussion groups.</p> <p>4 - Laboratory work and assignment</p>	٥- أساليب التعليم والتعلم:
<p>The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.</p>	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة:
٧- تقويم الطلاب :	

7- Student Assessment Methods

أ- الأساليب
المستخدمة :

Practical exam	To assess	c1-c3
Final exam	to assess	a1-a3, b1-b3
Oral exam	to assess	a1-a3, b1-b3
Mid-term exam	To assess	a1-a3, b1-b3
Report	to assess	d1-d3

Assessment Schedule

ب- التوقيت :

Assessment 1	Week #final exam	Week 14
Assessment 2	Week #oral exam	Week 14
Assessment 3	Week #practical exam	Week 12
Assessment 4	Week #mid-term exam	Week 4,8,12
Assessment 5	Week #report	Week 10

Weighting of Assessments

ج- توزيع الدرجات :

Final-Term Examination	60%
Oral Examination	10%
Practical Examination	20%
Semester work	5%
Mid-term examination	5%
Other types of assessment	0%

	Total	100%	
٨- قائمة الكتب الدراسية والمراجع :			
			أ- مذكرات:
1 - Designing Organic Synthesis, STUART WARREN			ب- كتب ملزمة
			ج- كتب مقترحة :
			د- دوريات علمية أو نشرات..

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Retrosynthetic analysis: creative chemistry, synthesis backwards.	1-2	a1	b1,b2		
Disconnection must correspond to know, reliable reactions.	3-4	a1	b1-b2		
Synthons are idealized reagents, choosing a disconnection, multiple step syntheses.	5-6	a2	b1-b2		
Functional group interconversion, two-group disconnections.	7-8	a2	b1,b2		
Donner and acceptor synthons, 1,5-related function groups.	9	a2	b1,b2		d1,d2
Natural reactivity and umpolung.	10	a2	b1,b2		
Resolution can be used to separate enantiomers.	11	a2	b1,b2		
Asymmetric synthesis, chiral reagents and chiral catalysts.	12	a2	b1,b2		

أستاذ المادة : أ.د/ محمد عباس محمد المتولي

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