

جامعة : المنصورة

كلية : العلوم

قسم: الكيمياء

توصيف مقرر دراسي

١ - بيانات المقرر		
المستوى : الثاني	أسم المقرر: Organic Chemistry 2	كود المادة: ٢٣١
عدد الوحدات الدراسية: ٣ نظري ٢ : تمارين - عملي : ٣		البرنامج: كيمياء

٢ - هدف المقرر: For students undertaking this course, the aims are to: <ul style="list-style-type: none">• Introduce the basic concepts of physical organic chemistry.• Study the mechanisms of the major reactions• Enable the students to distinguish between the different types of addition reactions.• Investigate the physical and chemical properties, and preparation methods of the main polynuclear compounds.• Acquiring the student the methods of investigation (practically) of organic compounds and working in groups.	
٣ - المستهدف من التدريس المقرر:	
a- Knowledge and Understanding : On completing this course, students will be able to: a1- explain the different factors affecting the addition reactions. a2- list the different classes of addition reactions. a3- list the different classes of polynuclear compounds and their reactivities.	أ - المعلومات والمفاهيم:
b- Intellectual Skills: On completing this course, students will be able to: b1- apply a suitable preparation method to prepare a desirable polynuclear compound. b2- suggest an appropriate mechanism for an addition reaction. b3- predict products of a hypothetical reaction.	ب- المهارات الذهنية

<p>c- Professional and Practical Skills: On completing this course, students will be able to:</p> <p>c1- distinguish practically between different classes of organic compounds.</p> <p>c2- handle well the tests of organic chemistry.</p> <p>c3- investigate practically the different functional groups of organic compounds.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر:</p>
<p>d-General and Transferable Skills: On completing this course, students will be able to:</p> <p>d1- solve problems on scientific basis.</p> <p>d2- Work effectively both in a team, and independently.</p>	<p>د- المهارات العامة :</p>
<p>Physical Organic</p> <ul style="list-style-type: none"> • Addition to carbon-carbon double bonds (Mechanism and orientation of addition) • addition to conjugated dienes – addition to α,β-unsaturated carbonyl compounds • addition to carbon-oxygen double bonds • Elimination reactions (dehydrohalogenation of different types of alkyl halides – dehydration of different types of alcohols) • Polynuclear aromatic hydrocarbons • Synthesis and chemistry of isolated systems (Diphenyl – Benzidines – Diphenylmethane – Triphenylmethane and Triphenylcarbinol • Synthesis and chemistry of condensed systems (Naphthalene – Naphthols – Anthracene – Anthraquinone and phenanthrene) • Practical: Investigation of Organic Compounds 	<p>٤- محتوى المقرر:</p>
<p>5 - Teaching and Learning Methods</p> <p>5.1 - Lectures using data show and board</p> <p>5.2 - Problem classes and group tutorial</p> <p>5.3 - Reports and discussion groups</p> <p>5.4 - Laboratory work and assignment</p>	<p>٥- أساليب التعليم والتعلم:</p>
<p>The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.</p>	<p>٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة:</p>

			٧- تقويم الطلاب :
7 - Student Assessment Methods			أ- الأساليب المستخدمة:
Final exam	to assess	a1-a3, b1-b3,d1	
Oral exam	to assess	a1-a3, b1-b3	
Practical exam	to assess	c1-c3,d2	
Quizzes	to assess	a1-a3, b1-b3	
Assessment Schedule			ب- التوقيت :
Assessment 1	Week # Final exam	14	
Assessment 2	Week # Oral exam	14	
Assessment 3	Week # Practical exam	12	
Assessment 4	Week # Quizzes	4, 8, 12	
Weighting of Assessments			ج- توزيع الدرجات :
Final-Term Examination	60%		
Oral Examination	10%		
Practical Examination	20%		
Semester work	0%		
Mid-term examination	10%		

Other types of assessment	0%	
Total	100%	
٨- قائمة الكتب الدراسية والمراجع :		
Physical Organic Chemistry Chemistry of Alicyclic and Polynuclear Compounds		أ- مذكرات:
		ب- كتب ملزمة
Organic Chemistry: Structure and Function by K. Peter C. Vollhardt and Neil E. Schore (2005) Organic Chemistry, T. W. Graham Solomons, T. W. Graham Solomons, Wiley; 8 edition (2003)		ج- كتب مقترحة :
http://en.wikipedia.org/wiki/Organic_chemistry http://www.organic-chemistry.org/ http://www.acdlabs.com/iupac/nomenclature/		د- دوريات علمية أو نشرات..

(أ) مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Physical Organic					
<ul style="list-style-type: none"> Addition to carbon-carbon double bonds (Mechanism and orientation of addition) 	1-3	a1,a2	b2		d1
<ul style="list-style-type: none"> addition to conjugated dienes – addition to α,β-unsaturated carbonyl compounds 	4-6	a1,a2	b2		d1
<ul style="list-style-type: none"> addition to carbon-oxygen double bonds 	7-8	a1,a2	b2		d1
<ul style="list-style-type: none"> Elimination reactions (dehydrohalogenation of different types of alkyl halides – dehydration of different types of alcohols) 	9-12	a1,a2	b2		d1
Polynuclear aromatic hydrocarbons					

<ul style="list-style-type: none"> Synthesis and chemistry of isolated systems (Diphenyl – Benzidines – Diphenylmethane – Triphenylmethane and Triphenylcarbinol) 	1-6	a3	b1,b3		d1
<ul style="list-style-type: none"> Synthesis and chemistry of condensed systems (Naphthalene – Naphthols – Anthracene – Anthraquinone and phenanthrene) 	7-13	a3	b1,b3		d1
Practical: Investigation of Organic Compounds	2-11			c1,c2,c3	d2

أستاذ المادة : أ.د. محمد عباس المتولي

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