: المنصورة

كـــلية : العلوم

قسم / الكيمياء

توصيف مقرر دراسى

١-بيانات المقرر		
الرمز الكود: ك١٣١	**أسم المقرر:** Principles of organic Chemistry	**المستوى : الاول**
البرنامج : الكيمياء	**عدد الوحدات الدراسية: ٣ نظرى : ٢ تمارين: ٠ عملى:٢**	

٢- هدف المقرر:	**For students undertaking this course, the aims are to:** 1 - Introduce the basic concepts of organic chemistry. 2 - Introduce the principles of nomenclature of major classes of organic compounds. 3 - Study the physical properties of major classes of organic compounds. 4 - Enable the students to use the concept of organic acids and bases in chemical reactions.
٣- المستهدف من التدريس المقرر:	
أ-المعلومات والمفاهيم:	**a- Knowledge and Understanding :** **On completing this course, students will be able to:** a1 - define the basic concepts of organic chemistry. a2 - recognize the different classes of organic compounds and their reactivities. a3 - list the different functional groups in organic compounds. a4 - recognize the main difference between organic acids and bases. a5 - recognize the main types of conformational isomers.
ب-المهارات الذهنية	**b- Intellectual Skills: On completing this course, students will be able to:**

b1 - apply nomenclature rules to name any organic compound. b2 - distinguish different organic reactions. b3 - predict products of an organic reactions on the bases of organic acid and organic base. b4 - distinguish between the types of conformational isomers.	
c-Professional and Practical Skills: On completing this course, c1 - identify simple unknown organic compounds. c2 - differentiate between different organic compounds. c3 - classify unknown organic compounds. **students will be able to:**	**ج- المهارات المهنية** **الخاصة بالمقرر:**
d-General and Transferable Skills: On completing this course, students will be able to: d1 -work effectively both in a team, and independently on solving organic chemistry problems. d2 - use IT and search for information. d3 - Communicate effectively with his teacher and colleagues**.**	**د- المهارات العامة :**
1- Chemical Bonds-The Octet Rule - Writing Lewis Structures-Formal Charge. 2- Quantum Mechanics-Atomic Orbitals-Molecular Orbitals Molecular Geometry: The Valence Shell Electron- Pair Repulsion (VSEPR) 3- Hybridization 4- Resonance 5- Representation of Structural Formulas- Hydrocarbons: Representative Alkynes, and Aromatic Compounds 6- Polar Covalent Bonds-Polar and Non - polar Molecules 7- Functional Groups - Alkyl Halides or Haloalkanes - Alcohols - Alcohol-Ether – Amines - Aldehydes and Ketones-Carboxylic acids - Esters- Nitriles 8- Conformational analysis of alkane 9- Acids and Bases	**٤- محتوى المقرر:**

1 - Lectures using data show and board. 2- Problem classes and group tutorial. 3- Homework, reports and discussion groups. 4- Laboratory work.	٥- اساليب التعليم والتعلم:
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة:
	٧- تقويم الطلاب :
7- Student Assessment Methods	أ- الأساليب المستخدمة :

Practical exam	**To assess**	c1-c3
Final exam	**to assess**	a1-a5, b1-b4
Oral exam	**to assess**	a1-a5, b1-b4
Report and quizzes	**to assess**	a1-a5, b1-b4, 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 #report and quizzes**	**Week 4,8,12**

ج- توزيع الدرجات :

Weighting of Assessments

Final-Term Examination	**60%**

Oral Examination	**10%**
Practical Examination	**20%**
Semester work	**10%**
Mid-term examination	**0%**
Other types of assessment	**0%**
Total	**100%**

٨- قائمة الكتب الدراسية والمراجع :

أ- مذكرات:	
ب- كتب ملزمة	1 - Morrison & Boyd, Organic Chemistry, Allyn & Bacon, Inc., Boston, 3rd Edn. (1973)
ج- كتب مقترحة :	
د- دوريات علمية أو نشرات..	1 - http://en.wikipedia.org/wiki/Organic_chemistry

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسى

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
1- Chemical Bonds-The Octet Rule - Writing Lewis Structures- Formal Charge	1	a1	b1		d1
2- Quantum Mechanics-Atomic Orbitals-Molecular Orbitals Molecular Geometry: The Valence Shell Electron- Pair Repulsion (VSEPR)	2	a1	b1		d2
3- Hybridization	3	a1	b1		d1
4- Resonance	4	a1	b1, b2		d2

5- Representation of Structural Formulas- Hydrocarbons: Representative Alkynes, and Aromatic Compounds	5-6	a1, a2, a3	b1, b2		d3
6- Polar Covalent Bonds-Polar and Non - polar Molecules	7	a2, a4	b1		d2
7- Functional Groups - Alkyl Halides or Haloalkanes - Alcohols - Alcohol- Ether – Amines - Aldehydes and Ketones- Carboxylic acids - Esters- Nitriles	8-9	a1, a2, a3	b1		d2, d3
8- Conformational analysis of alkane	10-12	a5	b1, b4		d2, d3
9- Acids and Bases	13-15	a1, a3, a4	b1, b3	c1, c2, c3	d2, d3

أستاذ المادة : د./ابراهيم عبد الجليل عبد السلام عبد العال