

جامعة : المنصورة

كلية : العلوم

قسم / الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الرمز الكود: ٣٣٥	اسم المقرر: 'Natural Products' Chemistry	المستوى : الثالث
البرنامج : الكيمياء	عدد الوحدات الدراسية: ٣ نظري : ٢ تمارين: - عملي: ٣	

٢- هدف المقرر:	
For students undertaking this course, the aims are to: 1 - • Introduction of some basic concepts of natural products. 2 - • Introduction of some basic concepts of biogenesis of natural products.	
٣- المستهدف من التدريس المقرر:	
a- Knowledge and Understanding : a - 1 - identify the basic concepts of natural products. a - 2 - explain the main theories and laws of natural products. a - 3 - illustrate the applications of natural products. On completing this course, students will be able to:	أ-المعلومات والمفاهيم:
b- Intellectual Skills: On completing this course, students will b - 1 - apply natural products. b - 2 - distinguish different types of natural products. b - 3 - interpretations the mechanisms for biogenesis of natural products. be able to:	ب-المهارات الذهنية
c-Professional and Practical Skills: On completing this course, students will be able to:	ج- المهارات المهنية الخاصة بالمقرر:

c - 1 - handle chemicals and deferent light sources laboratory procedures safely. c - 2 - preparation of some deferent reactions. c - 3 - isolation, separate, purify of the natural products. c - 4 - identify the chemical structures by spectroscopic methods. c - 5 - solve problems and suggesting its reaction mechanisms.	
d-General and Transferable Skills: On completing this course, d - 1 - work effectively on solving problems. d - 2 - work in groups effectively. students will be able to:	د- المهارات العامة :
1- Introduction, terpenoids classification 2- monoterpenoids - acyclic monoterpenoids, myrcene, citral, geraniol 3- monocyclic monoterppenoids, terpineol, carvohe, menthol, limonene 4- bicyclic monoterpenoids, pinane group, pinene, camphane group, camphor 5- biogenesis of terpenoids 6- Steroids, Diels hydrocarbon, sterols, chemistry of cholesterol, ergosterol 7- vitamin D, sex hormones, adrenocortical hormones 8- Alkaloids classification, phenyethyl amine group, ephedrine, pyrrolidine groups, hygrine 9- pyridine and piperidine group, pyrrolidine pyridine group, nicotine, phenantherene alkaloids 10- Practical: 3h/W	٤- محتوى المقرر:
1 - Active learning in lectures using data show and board 2 - Home works, reports and discussion groups 3 - Lab work.	٥- أساليب التعليم والتعلم:
The same as normal students, only skeletal disabilities are	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات

allowed in the Faculty of Science.			المحدودة:
٧- تقويم الطلاب :			
7- Student Assessment Methods			أ- الأساليب المستخدمة :
Practical exam	To assess	c1-c4,d2	
Final exam	to assess	a1-a3, b1-b3, c5,d1	
Oral exam	to assess	a1-a3, b1-b3, c5, d1	
Mid-term exam	To assess	a1-a3, b1-b3, c5,d1	
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	
<i>Weighting of Assessments</i>			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 :			
Chemistry of Natural Products	أ- مذكرات:		
	ب- كتب ملزمة		
1 - Chemistry of Natural Products, AM Dawidar, M Abdel-Mogib, MA Metwally & SN Ayyad, Mans. Univ. Press, 1998. 2 -Chemistry of Natural Products, Sujata V Bhat, Bhimsen A Nagasampagi & Meenakshi Sivakumar, Springer, Berlin, 2005.	ج- كتب مقترحة :		
1 - www.chemweb.com	د- دوريات علمية أو نشرات..		

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
•Introduction, terpenoids classification	1	a1		c5	d1
•monoterpenoids - acyclic monoterpenoids, myrcene, citral, geraniol	2-3	a2-3			
•monocyclic monoterppenoids, terpeneol, carvohe, menthol, limonene	4	a2-3		c5	d1
bicyclic monoterpenoids, pinane group, pinene, camphane group, camphor	5	a2-3			
biogenesis of terpenoids	6-7	a2-3		c5	
•Steroids, Diels hydrocarbon, sterols,	8	a2-3	b1,b2	c5	d1

chemistry of cholesterol, ergosterol					
•vitamin D, sex hormones, adrenocortical hormones	9	a2-3	b1,b2	c5	d1
• Alkaloids classification, phenylethyl amine group, ephedrine, pyrrolidine groups, hygrine	10-11	a2-3			
•pyridine and piperidine group, pyrrolidine pyridine group, nicotine, phenantherene alkaloids	12-14	a2-3		c5	d1
Practical parts of natural products 3h/W					
Isolation, purification, identifications & total synthesis of natural products	2-12			c5	

أستاذ المادة : أ.د./محمد محمود محمد أبوالذهب