

جامعة : المنصورة

كلية : العلوم

قسم / الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الرمز الكود : ك ٣٤٢	اسم المقرر: Chemical kinetics	المستوى : الثالث
البرنامج : الكيمياء	عدد الوحدات الدراسية: ٢ نظري : ٢ تمارين: ١ عملي: -	

For students undertaking this course, the aims are to:		٢- هدف المقرر :
1 - study the reaction rates and orders 2 - study the factors affecting the reaction rates 3 - study the reaction mechanisms		
٣- المستهدف من التدريس المقرر :		
a- Knowledge and Understanding :		أ- المعلومات والمفاهيم:
a - 1 - define and determine the reaction order and rate a - 2 - deduce the kinetic equation of the reaction a - 3 - predict the reaction mechanism On completing this course, students will be able to:		
b- Intellectual Skills: On completing this course, students will be		ب- المهارات الذهنية
b - 1 - distinguish between the reaction orders b - 2 - elucidate the reaction mechanism b - 3 - outline suitable method for determining the reaction order able to:		
c-Professional and Practical Skills: On completing this course, students will be able to:		ج- المهارات المهنية الخاصة

c - 1 - solve chemical kinetics problems c - 2 - think independently on reaction mechanism	بالمقرر:
d-General and Transferable Skills: On completing this course, students d - 1 communicate and collaborate effectively with their lecturer and colleagues d - 2 - work effectively , manage time and identify roles and responsibilities d - 3 - apply scientific models and tools effectively considering community ethics and traditions will be able to:	د- المهارات العامة :
1- reaction rate , order and molecularity 2- factors affecting reaction rate 3- methods for determining the reaction order 4- kinetic equations for different reaction orders 5- effect of temperature on the reaction rate 6- kinetics of the complex reactions 7- chain reactions 8- theories of reaction rates and mechanisms 9- effect of ionic strength on reaction rates 10- kinetics of enzyme reactions	٤- محتوى المقرر:
1 - lectures using data show and board 2 - solving problem and exercises 3 - home works , reports and discussions	٥- أساليب التعليم والتعلم:
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدود

			ة:
٧- تقويم الطلاب :			
7- Student Assessment Methods			أ- الأساليب المستخدمة :
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	
Assessment Schedule			ب- التوقيت :
Assessment 1	Week #final exam	Week 14	
Assessment 2	Week #oral exam	Week 14	
Assessment 3	Week #mid-term exam	Week 4,8,12	
Assessment 4	Week #report	Week 10	
Weighting of Assessments			ج- توزيع الدرجات :
Final-Term Examination	80%		
Oral Examination	10%		
Practical Examination	0%		
Semester work	10%		
Mid-term examination	0%		
Other types of assessment	0%		
Total	100%		
٨- قائمة الكتب الدراسية والمراجع :			
1 - course notes :chemical kinetics			أ- مذكرات:

2 - books: chemical kinetics ,Laidler ,2nd edition, T M H Edition 1973	
	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
reaction rate ,order and molecularity	1	a1	b1		
factors affecting reaction rate	2	a1	b1		
methods for determining reaction order	3	a1	b3		
kinetic equations for different reaction orders	4-5	a2	b1,b3		
effect of temperature on reaction rate	6	a1	b1		
kinetics of complex reactions	7	a2 , a3	b1. b2		
chain reactions	8	a2 , a3	b1 ,b2		
theories of reaction rates and mechanisms	9-10	a2 ,a3	b1 ,b2		
effect of ionic strength on reaction rate	11	a3	b2		
kinetics of enzyme reactions	12-13	a1 , a2 ,a3	b1 ,b2		

أستاذ المادة : ا.د/ حامد محمد ابو النضر

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