

توصيف مقرر دراسي

١- بيانات المقرر		
الرمز الكود: ك ٣١١	أسم المقرر: Weighted analysis and thermal gravimetric analysis	المستوى : الثالث
البرنامج : الكيمياء	عدد الوحدات الدراسية: ٢ نظري : ٢ تمارين: ١ عملي: -	

For students undertaking this course, the aims are to: <ul style="list-style-type: none"> Introduce the basic concepts of gravimetry Study the different classes of thermal analysis. Introduce an idea about the electrodeposition and conductimetry. Introduce an idea about the electrophoresis and the theory of HPLC. Acquire students the skills of distribution coefficient, adsorption isotherms and phase rule. Acquire students the IT, communication and group work skills.		٢- هدف المقرر :
٣- المستهدف من التدريس المقرر:		
a- Knowledge and Understanding : On completing this course, students will be able to: a1- explain the general principles of gravimetry. a2-describe the ideas of potentiometry, voltametry and polarography.	أ- المعلومات والمفاهيم:	
b- Intellectual Skills: On completing this course, students will be able to: b1- predict and solve the problems of gravimetry and thermogravimetry. b2- suggest appropriate technique(s) for the analysis of a certain material or solution. b3- interpret the results of thermal analysis of a certain material.	ب- المهارات الذهنية	
c-Professional and Practical Skills: On completing this course, students will be able to: c1- acute a distribution coefficient experiment of an organic or inorganic substance between two immiscible phases. c2- calculate the distribution coefficient of an organic or inorganic substance between	ج- المهارات المهنية الخاصة بالمقرر:	

two immiscible phases.			
c3- carry out the miscibility curve of different substances.			
c4- solve problems using a range of formats and approaches.			
d-General and Transferable Skills: On completing this course, students will be able to:			د- المهارات العامة :
d1- Use IT and web search engines for collecting information.			
d2- Work effectively both in a team, and independently.			
d3- Collaborate and communicate with others effectively.			
Gravimetry, thermogravimetry and volatilization: <ul style="list-style-type: none">• General principles -Preliminary treatment -Precipitation step – filtration and washing of the precipitate• Drying or ignition of the precipitate• Thermal analysis – volatilization or evolution methods			٤- محتوى المقرر:
5.1 - Lectures using data show and board 5.2 - Problem classes and group tutorial 5.3 - Reports and discussion groups 5.4- Laboratory work and assignment			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 المحدودة:
٧- تقويم الطلاب :			
7- Student Assessment Methods			أ- الأساليب المستخدمة :
Final exam	to assess	a1-a3,b1-b3,c4	
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 #mid-term exam	Week 4,8,12		
Assessment 4	Week #report	Week 10		
<i>Weighting of Assessments</i>				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 :				
				أ- مذكرات:
				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	a1 , a2	b1. b2		
chain reactions	8	a1 , a2	b1 ,b2		
theories of reaction rates and mechanisms	9-10	a1 , a2	b1 ,b2		
effect of ionic strength on reaction rate	11	a2	b2		
kinetics of enzyme reactions	12-13	a1 , a2	b1 ,b2		

أستاذ المادة : أ.د./مجدى ابراهيم محمد خليفة

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