

جامعة : المنصورة

كلية : العلوم

قسم / الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الرمز الكود: ٣١٢	أسم المقرر : Analytical separation methods- Electrochemical analysis	المستوى : الثالث
البرنامج : الكيمياء	عدد الوحدات الدراسية: ٣	نظري : ٢ تمارين: - عملي: ٣

<b>For students undertaking this course, the aims are to:</b>  1 - Improve their capacity in understanding the principles of all types of chromatographic methods and separation techniques  2 - Apply chromatography in separating all analytes whether they are colored or not as well as organic or non-organic  3 - Acquire the skills and knowledge of many spectroscopic methods of analysis  4 - Apply the molecular and atomic spectroscopy in determining many functions of organic and inorganic substances Apply the molecular and atomic spectroscopy in determining many functions of organic and inorganic substances		٢- هدف المقرر:
<b>٣- المستهدف من التدريس المقرر:</b>		
<b>a- Knowledge and Understanding :</b>  a - 1 - Solve many scientific problems in chromatographic techniques  a - 2 - Illustration of most sophisticated techniques applied in separation and preconcentration methods  a - 3 - understand qualitative and quantitative analysis of separated analytes in both planar and column methods  a - 4 - Understand the principles of spectrometric theories and studying many interactions of radiation with matter  a - 5 - Apply spectrometric techniques in determination of many functions in organic and inorganic materials  <b>On completing this course, students will be able to:</b>		أ- المعلومات والمفاهيم:

<p><b>b- Intellectual Skills: On completing this course, students will be able</b></p> <p>b - 1 - apply new sophisticated techniques in chromatography and spectroscopic methods</p> <p>b - 2 - Acquire deep understanding in solving many interesting environmental problems Acquire deep understanding in solving many interesting environmental problems.</p> <p><b>to:</b></p>	<p>ب- المهارات الذهنية</p>
<p><b>c-Professional and Practical Skills: On completing this course,</b></p> <p>c - 1 - understand new technologies and apply new sophisticated techniques</p> <p><b>students will be able to:</b></p>	<p>ج- المهارات المهنية  الخاصة بالمقرر:</p>
<p><b>d-General and Transferable Skills: On completing this course, students will be able to:</b></p> <p>d - 1 - understand new technologies and apply new sophisticated techniques.</p>	<p>د- المهارات العامّة :</p>
<p>1- Introduction to Chromatographic theory</p> <p>2- Chromatographic techniques applied in Chromatographic method and mechanism</p> <p>3- evaluation of Chromatographic data analysis for qualitative and quantitative</p> <p>4- Survey of spectrochemical methods</p> <p>5- Instrumentation-application</p> <p>6- Atomic spectroscopy atomic fluorescence and x-ray fluorescence spectroscopy applications</p>	<p>٤- محتوى المقرر:</p>
<p>1 - Classical board and data show</p> <p>2 - IT and web sites</p> <p>3 - Chemical labs</p>	<p>٥- أساليب التعليم والتعلم:</p>
<p><b>The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.</b></p>	<p>٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة</p>

		ة:
٧- تقويم الطلاب :		
7- Student Assessment Methods		أ- الأساليب المستخدمة :
Practical exam	To assess	
Final exam	to assess	a1- a5,b1-b3,c1,d1
Oral exam	to assess	a1- a5,b1-b3,c1,d1
Mid-term exam	To assess	a1- a5,b1-b3,c1,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 7
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 :	
1 - Instrumental Methods of Analysis;G.W.Ewing,McGraw Hill,4th Ed 2 - Analytical Chemistry,6th Ed, D.Skog;D.M.West,J.Holler 3 - <a href="http://www.files.chem.vt.edu/chem-ed/ac-basic.html">http://www.files.chem.vt.edu/chem-ed/ac-basic.html</a>	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
1- Introduction to Chromatographic theory	1-6	a1-3	b1-3	c1	d1
2- Chromatographic techniques applied in Chromatographic method and mechanism	7-10	a1-3	b1-3	c1	d1
3- evaluation of Chromatographic data analysis for qualitative and quantitative	11-12	a1-3	b1-3	c1	d1
4- Survey of spectrochemical methods	1-6	a2,4,5	b2-3	c1	d1
5-Instrumentation-application	7-10	a2,4,5	b2-3	c1	d1
6- Atomic spectroscopy atomic fluorescence and x-ray fluorescence spectroscopy applications	11-12	a2,4,5	b2-3	c1	d1

أستاذ المادة : ا.د/ أحمد محمد مبروك الوكيل

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