

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Chemistry		Module Delivery
Module Type	Basic		Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	CIV12201		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	1	Semester of Delivery	
Administering Department	Civil Engineering	College	Al-Mansour University Colloge
Module Leader	Prof. Dr. Hamed Hussein Rajab Ass. Lec. Nour Jabbar Hattab	e-mail	hamid.selamin@muc.edu.iq noor.jabbar@muc.edu.iq
Module Leader's Acad. Title	Prof. Dr., Ass. Lec.	Module Leader's Qualification	Ph.D, Ms.C.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	01/10/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	Aims The module is designed for students to understand the basic principles and learn the experimental techniques of classical titrimetric and gravimetric methods of analysis.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none">1- explain the fundamentals of analytical chemistry and steps of a characteristic analysis.2- expresses the concentration, quantitative analysis methods..3- explains the chemical equilibrium and equilibrium constant.4- define the different gravimetric methods, the properties of precipitate and precipitating reagent, uses the gravimetric calculations.5- express the titrimetric analysis methods, the terms such as standard solution, titration, back titration, - equivalence point, end point, primary and secondary standard.6- expresses solves volumetric calculations.7- define electrochemistry, the terms cathode, anode, galvanic cell, salt bridge, cell voltage, oxidizing agent, reducing agent.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Basic fundamentals of analytical chemistry, branches (gravimetric and volumetric analysis) and its applications. In addition to study the dilution and titration and Electrochemical reaction.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, asking questions, discussions and solving samples of problems in class and homework.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 11	LO #1, 2, 3,6 and 7
	Online Assignments	2	10% (10)	3, 13	LO # 4, 5 and 7
	Projects / Lab.	1	15% (15)	Continuous	All
	Onsite Assignments	1	5% (5)	12	All
Summative assessment	Midterm Exam	2hr	10% (10)	7,14	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Chemistry and its branches, Qualitative and quantitative analysis
Week 2	Expressions of concentration of solutions
Week 3	Aqueous solution, Dilution
Week 4	Stoichiometric relationships
Week 5	Standard Solution

Week 6	Chemical Equilibrium
Week 7	Mid Exam 1
Week 8	Gravimetric analysis
Week 9	Volumetric analysis
Week 10	Titration
Week 11	Acid and Bases
Week 12	The Electrochemistry reactions
Week 13	Gases
Week 14	Mid Exam 2
Week 15	Preparatory week before the final Exam
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction , chemical glassware, laboratory safety practices
Week 2	Melting and Boiling point
Week 3	Determine the exact Concentration of HCL solution by titration
Week 4	Identify an unknown chemical mixture
Week 5	Simple or fraction distillation
Week 6	Exam
Week 7	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Analytical Chemistry. By Douglas A. Skoog	Yes
Recommended Texts		
Websites		

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

