



Ministry of Higher Education and  
Scientific Research - Iraq  
Al-Mustaqbal University  
College Of Sciences  
Department of Artificial Intelligence



## MODULE DESCRIPTOR FORM

### نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Analytical Chemistry		Module Delivery
Module Type	BASIC		-Theory Lecture -Lab -PracticalSeminar
Module Code	UOMU0341012		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	1
Administering Department		College	
Module Leader	Haider Mutlaq Musa	e-mail	
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	
Module Tutor	None	e-mail	None
Peer Reviewer Name		e-mail	
Review Committee Approval		Version Number	

Relation With Other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

<b>Module Aims, Learning Outcomes and Indicative Contents</b> أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
<b>Module Aims</b> أهداف المادة الدراسية	1- Expanding the list of chemical reagents, chemical reactions, and methods for analyzing inorganic materials 2- Developing methods for analyzing organic materials 3- Finding ways to analyze organic and elemental compounds, especially organic silicon compounds 4- Conducting research in the field of analyzing very pure materials used in the atomic industry, wireless electronic devices, and laser devices. 5- Use organic reagents to analyze inorganic materials 6- Finding the theory of complexes and its practical applications 7- Developing the analytical chemistry of anhydrous solutions, which now occupies its place as a major process in various branches of science, industry and modern technology.
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	1- Preparing and qualifying specialists to meet the requirements of the labor market 2- Encouraging and developing scientific research in the field of analytical chemistry in order to keep pace with development and provide the student with the latest theoretical and practical information for this specialty. 3- Preparing the student appropriately for postgraduate studies and scientific research in his specialty
<b>Indicative Contents</b> المحتويات الإرشادية	1-Theoretical presentation 2-The seminar 3-Posters 4- Laboratory 5-Preparing reports and studies
<b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم	
<b>Strategies</b>	1- Student groups 2- Workshops 3- Method of giving lectures 4- E-learning on campus 5- Experiential learning 6- Education application

<b>Student Workload (SWL)</b> الحمل الدراسي للطالب
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<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	102	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	7
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	98	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	150		

<b>Module Evaluation</b> تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	1	10% (10)	5	LO # 1 and 3
	<b>Practical Seminar(Lab).</b>	2	15% (15)	Continuous	LO # 2 , 4 and 5
<b>Summative assessment</b>	<b>Midterm Exam</b>	1 hr	15% (15)	14	LO # 1 to 5
	<b>Final Exam</b>	3hr	60% (60)	16	All
<b>Total assessment</b>			100% (100 Marks)		

<b>Delivery Plan (Weekly Syllabus)</b> المنهاج الاسبوعي النظري	
	<b>Material Covered</b>
<b>Week 1</b>	<b>A brief overview of the development of analytical chemistry</b>
<b>Week 2</b>	Classification of analytical chemistry
<b>Week 3</b>	Chemical equilibria
<b>Week 4</b>	Ionic strength
<b>Week 5</b>	Methods of preparing solutions
<b>Week 6</b>	Standard solution
<b>Week 7</b>	Exam
<b>Week 8</b>	Types of calibrations and volumetric analysis
<b>Week 9</b>	Evidence
<b>Week 10</b>	Theories of explaining the work of evidence
<b>Week 11</b>	Volumetric analysis
<b>Week 12</b>	Weight analysis
<b>Week 13</b>	Quantitative analysis

<b>Week 14</b>	Classification of chemical analysis methods
<b>Week 15</b>	<b>Final Exam</b>

<b>Delivery Plan (Weekly Lab. Syllabus)</b> المنهاج الاسبوعي للمختبر	
	<b>Material Covered</b>
<b>Week 1</b>	
<b>Week 2</b>	
<b>Week 3</b>	
<b>Week 4</b>	
<b>Week 5</b>	
<b>Week 6</b>	
<b>Week 7</b>	
<b>Week 8</b>	
<b>Week 9</b>	
<b>Week 10</b>	
<b>Week 11</b>	
<b>Week 12</b>	
<b>Week 13</b>	

<b>Learning and Teaching Resources</b> مصادر التعلم والتدريس		
	<b>Text</b>	<b>Available in the Library?</b>
<b>Required Texts</b>		Yes
<b>Recommended Texts</b>		No
<b>Websites</b>		

## APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
NB 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.				