جامعة المجمعة
Majmaah University

Course Specifications

Institution:	Majmaah University
Academic Department :	Chemistry
Programme :	Chemistry
Course :	Quantitative Analytical Chemistry
Course Coordinator :	LecturerD .Mai Makki Mahmoud
Programme Coordinator :	Dr. Gehan Alaemary
Course Specification Approved Date :	18/ 12 / 1435 H□

This form compatible with NCAAA 2013 Edition

A. Course Identification and General Information

1 - Course title : Quantitative Analytical Chemistry.	Course Code: Chem 315.
2. Credit hours : 3	
3 - Program(s) in which the course is offered: Chemistry	
4 – Course Language : Arabic	
5 - Name of faculty member responsible for the course: Lecturer. .Mai Makki Mahmoud	
6 - Level/year at which this course is offered :	
7 - Pre-requisites for this course (if any) : • **Qualitative analytical Chemistry**	
8 - Co-requisites for this course (if any) : • **Quantitative analytical chemistry lab**	
9 - Location if not on main campus **:** **main campus**	

10 - Mode of Instruction (mark all that apply)

A - Traditional classroom		What percentage?	..... %		
B - Blended (traditional and online)	√	What percentage?	75 %		
D - e-learning	√	What percentage?	25%		
E - Correspondence		What percentage?	..... %		
F - Other		What percentage?	..... %		

Comments :

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B Objectives

What is the main purpose for this course?

- Definition for the student the importance of quantitative analysis and volumetric titration and concept.
- Focus on the concept of volumetric for different calibrations.
- studying various images of sediment.

Briefly describe any plans for developing and improving the course that are being implemented :

Using Internet in the research work .

C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
-A general introduction in analytical chemistry and quantitative types of volumetric gravimetric.	1	2
-Calibrations tie and calculate for the pH, and the evidence and reagents.	4	8
- Calibrations formation of complexes and complexes and their applications.	1	2
- Calibrations deposition (Mohr- way Foherd- Fagan)	1	2
- Redox titrations and applications.	1	2
-Introduction to gravimetric analysis and gravimetric analysis steps. - Photos deposited with an explanation of the theoretical foundations of the deposition.	4	8
-completion of the deposition and the factors effected with an explanation of organic and inorganic precipitates .	2	4

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	.....	.....	.....	.....	.....	2
Credit	2	.....	2	.....	.....	3

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	**- To learn the concept of quantitative analytical chemistry and its importance. - To learn how to solve the various calibrations volumetric calculations of all kinds.**	Lecture Exercises Discussion	Exams, Questions
1.2	**The ability to deal with different systems laboratory calibrations and the use of volumetric tools.**	Experiments Discussion	Experimental Study, Exams
2.0	**Cognitive Skills**		
2.1	**- Describe the various types of volumetric calibrations and to differentiate between them.**	Lecture, Exercises Discussion	Exams, Questions
2.2	**Description Steps gravimetric analysis.**	Lecture, Exercises Discussion	Exams, Questions
3.0	**Interpersonal Skills & Responsibility**		
3.1	**Teamwork**	Divide in the form of practical sets.	Oral exercises.
4.0	**Communication, Information Technology, Numerical**		
4.1	**- Calibrations calculations for neutralization interactions , redox , sedimentation and complexes**	Lecture, Discussion	Oral exercises Exams.
5.0	**Psychomotor**		
5.1	**Experimental work**	Lecture, Discussion	Oral exercises Exams.

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment

1	**First Exam**	6	15
2	**Second Exam**	10	15
3	**Final Exam**	14	60
4	**Resaearch**	9	10

D. Student Academic Counseling and Support

Academic Advising

E. Learning Resources

1. List Required Textbooks :

- Analytical Chemistry volumetric analysis and weighted, Ibrahim Al-Zamel. 1993.
- Quantitative analytical chemistry, 5th edition by j.S. Fritz and G.H. Schneck. 1987 .

2. List Essential References Materials :

- Analytical Chemistry volumetric analysis and weighted, Ibrahim Al-Zamel. 1993.
- Key creativity in Chemistry, Omar Helwah .

3. List Recommended Textbooks and Reference Material :

- Quantitative analytical chemistry, 5th edition by j.S. Fritz and G.H. Schneck. 1987

4. List Electronic Materials :

- chemix, chemsketch, chemdraw programs.
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5. Other learning material :

- Crocodile program.

Virtual lap

F. Facilities Required

1. Accommodation

- Seats and computers.

2. Computing resources

- Lap top.

3. Other resources

- Projector.

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- Questionnaires Evaluation.

2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor : • Discussions.
3 Processes for Improvement of Teaching : • Review course plans periodically and adjust..
4. Processes for Verifying Standards of Student Achievement • Corrected tests with the teaching staff of the department..
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : • Questionnaires Evaluation.

Course Specification Approved
Department Official Meeting No (…..) Date … / …. / ….. *H*

Course's Coordinator

Name : D .Mai Makki Mahmoud

Signature : D .Mai Makki Mahmoud

Date : 28/ 12 / 1436 *H*

Department Head

Name : Gehan Alaemary.

Signature : Gehan

Date : …./ … / …… *H*