Form: Course Syllabus		
	Form Number	EXC-01-02-02A
	Issue Number and Date	2963/2022/24/3/2 5/12/2022
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	Number of Pages	06

1.	**Course Title**	Experimental General Chemistry
2.	**Course Number**	0303106
3.	**Credit Hours (Theory, Practical)**	(1,3)
	Contact Hours (Theory, Practical)	(1,3)
4.	**Prerequisites/ Corequisites**	0303102
5.	**Program Title**	BSc in chemistry
6.	**Program Code**	0303
7.	**School/ Center**	School of Science, The University of Jordan
8.	**Department**	Chemistry
9.	**Course Level**	**BSc**
10.	**Year of Study and Semester (s)**	2nd year
11.	**Other Department(s) Involved in Teaching the Course**	NA
12.	**Main Learning Language**	English
13.	**Learning Types**	☒ Face to face learning ☐Blended ☐Fully online
14.	**Online Platforms(s)**	☐Moodle ☒ Microsoft Teams ☐ Exambuilder
15.	**Issuing Date**	-
16.	**Revision Date**	23-11-2024

17. Course Coordinator:

Name: Professor Ehab AlShmaileh
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Phone number: 22141

18. Other Instructors:

Year 2024-2025

Name: Dr. Deeb Taher

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Name: Malak Qadri

Office number:

Phone number: 22133

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19. Course Description:

The course includes experiments dealing with the following topics: safety and laboratory rules, chemical observations, stoichiometry, volumetric analysis, oxidation and reduction, colligative properties, thermochemistry, chemical kinetics, equilibrium, electrochemistry, thermodynamics.

20. Program Intended Learning Outcomes:

(To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)**, the program's student outcomes must fulfill the above ABET student outcomes. You can add new outcomes for your program, but all the six ABET-outcomes must be included.**

SO-1. Problem Solving: Graduates will be able to apply mathematical and scientific knowledge to identify, formulate, and solve technical or scientific problems relevant to the discipline of chemistry.

SO-2. Design: Graduates will be able to use their understanding of chemistry concepts and principles to formulate and design systems, processes, procedures, or programs to meet desired goals and outcomes.

SO-3. Experimental Skills: Graduates will be able to design, conduct, and analyze experiments or test hypotheses, utilizing appropriate chemical techniques and scientific judgment to draw meaningful conclusions.

SO-4. Communication: Graduates will be able to communicate scientific information effectively and accurately to a range of audiences, including both technical and non-technical audiences.

SO-5. Ethics and Global Context: Graduates will understand and apply ethical and professional responsibilities in the context of the impact of technical and scientific solutions on global, economic, environmental, and societal issues.
SO-6. Teamwork: Graduates will be able to work effectively as part of a team, establishing goals, planning tasks, meeting deadlines, and analyzing risk and uncertainty in the context of chemistry-related projects and initiatives.
SO-7. Handling Chemicals: An ability to apply the proper procedures for safe handling of chemicals.

21. Course Intended Learning Outcomes: (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

1. Perform accurate scientific measurements and experiments using appropriate laboratory techniques, such as titrations, spectroscopy, and calorimetry.
2. Safely handle laboratory equipment, chemicals, and waste, adhering to established safety guidelines and protocols.
3. Demonstrate the ability to prepare solutions, conduct quantitative analyses, and interpret the results in the context of chemical theories.
4. Effectively communicate experimental findings through lab reports, demonstrating clear and logical presentation of data, analysis, and conclusions.

Course CLOs	The learning levels to be achieved					
	Remembering	**Understanding**	**Applying**	**Analysing**	**evaluating**	**Creating**
1	**x**					
2		**x**				
3		**x**				
4			**x**	**x**	**x**	

22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program:

~~Program SOs~~ / ~~Course CLOs~~	SO (1)	SO (2)	SO (3)	SO (4)	SO (5)	SO (6)	SO (7)
1	x						
2			x				x
3		x	x			x	
4		x		x	x		

23. Topic Outline and Schedule:

Week	Lecture	Topic	CLO/s Linked to the Topic	Learning Types (Face to Face/ Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous	Evaluation Methods	Learning Resources
1	1	Check-In	-					
2	2	(Safety Rules and Laboratory + Techniques and Measurements	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
3	3	Stoichiometry: Empirical Formula	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
4	4	Limiting Reactant	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
5	5	Volumetric Analysis: Acid-Base Titration	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
6	6	Bleach Analysis	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
7	7	Molar Mass of a Volatile Liquid	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
8	8	Thermochemistry and Hess's Law	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
9	9	Colligative Properties	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
10	10	Rates of Chemical Reactions	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for

								General Chemistry
11	11	Determination of Chemical Equilibrium	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
12	12	Solubility Product Constant and Common Ion Effect	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
13	13	Electrochemistry	1,2,3,4	**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry
14	14	Check-out		**Face to Face**	In class	S	Quizzes + Exam	Laboratory Manual for General Chemistry

24. Evaluation Methods:

Opportunities to demonstrate achievement of the CLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	CLOs	Period (Week)	Platform
Quizzes	20	All	1	weekly	Face to Face
Reports	10	All	1,4	weekly	Face to Face
Evaluation	10	All	1,2,3,4	weekly	Face to Face
Mid	20	All	1,2,4	8	Face to Face
Final	40	All	1.2.4	16	Face to Face

25. Course Requirements:

(e.g.: students should have a computer, internet connection, webcam, account on a specific software/platform…etc.): A previous knowledge on simple arithmetic/mathematic skills is needed as well as how to use the scientific calculator.

26. Course Policies:

A. Attendance policies:

Students should attend at least 85% of the total number of lectures.

B- Absences from exams and submitting assignments on time:

Students who miss an exam must submit an acceptable excuse and then a makeup exam will be appointed.

C- Health and safety procedures:

Strictly according to university regulations.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

Followed according to university regulations.
E- Grading policy:
1. Mid exam 20%
2. Semester/Lab work 40%
3. Final exam: 40%
The letter grade scale is adopted.
F- Available university services that support achievement in the course:

27. References:

Required book (s), assigned reading and audio-visuals: General Chemistry, 11th ed., D. Ebbing & S. Gammon, Brooks Cole, 2017.

B- Recommended books, materials, and media:

1) Chemistry, 9th ed., S. Zumdahl & S. Zumdahl, Brooks Cole, 2013.

2) 2. General Chemistry, The essential concept, 7th ed., R. Chang, McGraw-Hill, 2016.

28. Additional information:

This course is required by all chemistry students at the University of Jordan.

Name of the Instructor or the Course Coordinator: **Dr. Ehab AlShamaileh, Prof.** Signature: Date:23-11-2024

Name of the Head of Quality Assurance Committee/ Department **Dr., Prof.** Signature: Date:

Name of the Head of Department **Dr. Murad A. AlDamen, Prof.**	Signature:	Date:
Name of the Head of Quality Assurance Committee/ School or Center	Signature:	Date:
Name of the Dean or the Director **Dr. Mahmoud Jaghoub, Prof.**	Signature:	Date: