

Course Syllabus

1	Course title	Graduation Project	
2	Course number	0303492	
3	Credit hours	2	
	Contact hours (theory, practical)	Theory, 1 hour; practical, 3 hours	
4	Prerequisites/corequisites	Successfully completing 90 credit hours	
5	Program title	Bachelors in chemistry	
6	Program code	03	
7	Awarding institution	The University of Jordan	
8	School	Faculty of Science	
9	Department	Chemistry	
10	Course level	Third year	
11	Year of study and semester (s)		
12	Other department (s) involved in teaching the course	NA	
13	Main teaching language	English	
14	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	Issuing/Revision Date	02/01/2024	

17 Course Coordinator:

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Contact hours:

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**18 Other instructors:**

Name:

Office number:

Phone number:

Email:

Contact hours:

Name: NA

Office number:

Phone number:

Email:

Contact hours:

19 Course Description:

The student shall independently design, carry out and report a project within the subject of chemistry.

20 Course aims and outcomes:



A- Aims:

The aim of this course is to provide the students with good experience on handling an advanced instrument in chemical analysis including UV-Visible spectrophotometer, refractometer, atomic absorption spectrometer (AAS), atomic emission spectrometer (AES), high performance liquid chromatograph (HPLC), and gas chromatograph (GC). The understanding and differentiation between different chromatographic mechanisms such as partitioning, ion exchange and adsorption chromatography are other objectives of this course. In addition to those, students will develop skills like being a team player through working in groups and technical writing skills through report writing with criteria that meets this stage.

B- Students Learning Outcomes (SLOs):

SLO-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.

SLO-2. Design: Graduate 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.

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

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

SLO-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.

SLO-6. Teamwork: Graduates will be able to work effectively as a part of a team, establishing goals, planning tasks, meeting deadlines, and analyzing risk and uncertainty in the context of chemistry-related projects and initiatives.

SLO-7. Handling Chemicals: An ability to apply the proper procedures for safe handling of chemicals.

Upon successful completion of this course, students will be able to:

CLO-1. Formulate a relevant problem for investigation from a chosen subject within the subject of Chemistry.

CLO-2. Apply knowledge and proficiency that has been acquired during the period of study to a smaller research project in an independent and systematic way.

CLO-3. Choose and justify the study method in research.

CLO-4. Analyse and defend the chemical problem and plausible hypotheses formulated without a complete set of information and experimental data.

CLO-5. Locate and critically review information and summarise this in a scientific manner.

CLO-6. Plan, structure and execute a research project.

CLO-7. Judge the scientific and practical relevance of the results obtained.

CLO-8. Work to a timetable following the identified milestones and validating the working hypotheses.

CLO-9. Express themselves well in writing in a verbally and scientifically correct manner.

CLO-10. Create and execute an oral presentation of the results of the project, properly arguing and defending the conclusions achieved.

SLOs CLOs of the course	SLO (1)	SLO (2)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (7)
1		√					
2	√		√				
3					√		
4						√	
5			√				
6						√	
7			√				
8		√	√				√
9				√			

21. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1							
2	2.1							
3	3.1							
4	4.1							
5	5.1							
6	6.1							
7	7.1							
8	8.1							
9	9.1							
10	10.1							
11	11.1							
12	12.1							

22 Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Report	40				
Presentation	30				



Project Jury Assessment	30				

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Successfully completing 90 credit hours

24 Course Policies:

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25 References:

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26 Additional information:

NA



Name of Course Coordinator: Prof. Dr. Deeb Taher-----Signature: ----- Date: ----- -----
Head of Curriculum Committee/Department: Deeb Taher----- Signature: ----- -----
Head of Department: --Dr Firas Awwadi----- Signature: -----
Head of Curriculum Committee/Faculty: ----- Signature: -----
Dean: ----- Signature: -----