



Course Syllabus
According to JORDAN National Qualification
Framework (JNQF)

Course Name: Research Paper and Seminar

Course Number: 11014291

General Course Information:

Course title	Research Paper and Seminar
Course number	11014291
Credit hours	1
Education type	1 hours [Face-to-Face]
Prerequisites/corequisites	Department approval
Academic Program	Bachelor
Program code	01
Faculty	Science
Department	Chemistry
Level of course	Fourth year
Academic year /semester	2022/2023 First Semester
Awarded qualification	Bachelor degree in chemistry
Other department(s) involved in teaching the course	N/A
Language of instruction	English
Date of production/revision	16/10/2022

Course Coordinator:

Coordinator's name	Dr. Samer alawaideh
Office No	
Office Phone extension number	2635
Office Hours	
Email	Alawaidah.s@iu.edu.jo

Other Instructors:

Instructor name	
Office No	
Office Phone extension number	
Office Hours	
Email	

Course Description (English/Arabic):

English	Scientific research methods, scientific sources of information, writing a research paper, preparing for presentation about a specific topic in the field of chemistry
Arabic	طرق البحث العلمي; المصادر العلمية المختلفة للمعلومات; كتابة ورقة بحثية; اعداد عرض تقديمي لموضوع معين في مجال الكيمياء.

Textbook: Author(s), Title, Publisher, Edition, Year, Book website.

1. No text book

References: Author(s), Title, Publisher, Edition, Year, Book website.

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| 1. D.C. Harris, <i>Quantitative Chemical Analysis</i> , 9th Ed., W.H. Freeman and Co., New York, NY, 2015. |
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Course Educational Objectives (CEOs):

1.	Acquiring the skills necessary to read and summarize original research articles.
2.	Knowing scientific research methods.
3.	Knowing how to Search and find information about specific topic.
4.	Writing review paper.
5.	Preparing logical and oral presentations.
6.	Commitments to ethical principles in research.

Intended Learning Outcomes (ILO's):

1.	Subject Intended learning outcomes (ILOs) describe what students are expected to know and be able to do at the end of the course. These outcomes are related to the knowledge, skill and competence that students acquire:	Relationship to CEOs	Contribution to PLOs	Bloom Taxonomy Levels*	Descriptors* *
2. A	Knowledge and Understanding:				
3. A 1	Student be able to understand the principles of scientific research methods.	1,2	1	1	K
4. B	Intellectual skills:				
5. B 1	Student has skills necessary to read and summarize original scientific research articles.	1,3,4,6	7,8,9	4	S
6. B 2	Student be able to prepare logical and oral presentations	5	7,8,9	3	C
7. B 3					
8. C	Subject specific skills:				
9. C 1					
10. C 2					
11. D	Transferable skills:				
12. D 1					

***Bloom Taxonomy Levels**

Level #	1	2	3	4	5	6
Level Name	Knowledge	Comprehension	Application	Analysis	Evaluation	Synthesis

**** Descriptor (National Qualification Framework Descriptors): K : Knowledge, S: Skill, C: Competency.**

Program Learning Outcome (PLOs):

Program Learning Outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviours that students acquire as they progress through the program. A graduate of the (Chemistry) program will demonstrate:	Descriptors*		
	K	S	C

1.	Describe the fundamental scientific principles and theories across the four subfields of chemistry (Organic, inorganic, analytical and physical).	✓		
2.	Identify and confirm chemical compounds structures as well as determine chemical composition	✓		
3.	Establish and concludes mechanisms of physical and chemical processes in addition to the ability of mastering qualitative and quantitative determination			✓
4.	Solve the scientific problems using different mechanisms and procedures based on critical thinking		✓	
5.	Conduct scientific experiments in chemistry			✓
6.	Commitment and interest in lifelong learning, and collaborate effectively with other people in a team			✓
7.	Prepare logical, organized and concise written reports, and oral and poster presentations that effectively communicate chemical content to other scientists.		✓	
8.	Commitment to the ethical principles of chemical research.			✓
9.	Find information about chemistry through databases and information		✓	
10.	Evaluation of calculations in chemistry experiments and information analysis using computer software.			✓
11.	Demonstrate safety laboratory techniques.		✓	

**** Descriptors according to the national qualifications framework (K: knowledge, S: skill, C: Competency)**

Weekly Schedule *(please choose the type of teaching)*

✓ **Face to Face**

Hybrid (2 Lectures Face – To - Face +1 Lecture Asynchronous)

Hybrid (1 Lectures Face – To - Face +1 Lecture Asynchronous)

Online (2 Lectures Synchronous +1 lecture Asynchronous)

Week	First Lecture (Face to Face)	Second Lecture (Face to Face)	Third Lecture (Face to Face)	Ach. ILOs	Ach. PLOs	Descriptors* *
1-4	Reading and summarize scientific papers	Reading and summarize scientific papers	Reading and summarize scientific papers	A1, B1, B2	1,7,8,9	
5-8	Scientific research methods	Scientific research methods	Scientific research methods	A1, B1, B2	1,7,8,9	
9-11	Writing review paper	Writing review paper	Writing review paper	B1	7,8	
14	Prepare for presentation	Prepare for presentation	Prepare for presentation	B2	7	
15	Final Exam					

Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- **Interactive videos**
- **Practice Labs**
- **Discussion Forums**
- **Quizzes**
- **Other Interactive online activities**
- **Reports**

Course Policies:

A- Attendance policies:

The maximum allowed absences is 15% of the lectures.

B- Absences from exams and handing in assignments on time:

Midterm exam can be retaken based on approval of excuse by the instructor's discretion.

Not handing assignment on time will incur penalties.

C- Academic Health and safety procedures

D- Honesty policy regarding cheating, plagiarism, and misbehaviour:

Cheating, plagiarism, misbehaviour will result in zero grade and further disciplinary actions may be taken.

E- Grading policy:

- All homework is to be posted online through the e-learning system.
- Exams will be marked within 72 hours and the marked exam papers will be handed to the students.
- Online Activities (Course Videos, Practice labs, Discussion Forums, Quizzes) **_20_%**
- Midterm **_30_%**
- Final Exam **50__%**

F- Available university services that support achievement in the course: **E-Learning Platform, Labs, Library.**

Required equipment:

- **PC / Laptop with webcam and mic**
- **Internet Connection**
- **Access to the IU E-Learning Platform at: <https://elearn.iu.edu.jo/>**
- **E-learning plan**
- Satisfaction questionnaires for online and face-to-face learning
- Software for e-learning
- Training

Assessment Tools implemented in the course:

- Final Exam
- Midterm Exam
- Quizzes
- Homework
- Practice Labs
- Discussion Forums
- Periodic reports for learning assessment
- Improvement plans for online or face-to-face teaching

- Others:.....
- ✓ Integrative Projects
- ✓ Writing Reports
- ✓ Illustrative presentations

Responsible Persons and their Signatures:

Course Coordinator	Dr. Samer Alawaideh	Completed Date	16/10/2022
		Signature	<i>Samer Alawaideh</i>
Received by (Department Head)	Dr. Manal khabbas	Received Date	23/10/2022
		Signature	<i>Manal Khabbas</i>