Course Syllabus

General Information and Course Details:

Course title	**Practical chemical research**
Course number	**1101463**
Credit hours (theory, practical)	**three hours**
Contact hours (theory, practical)	**6-7 Sun., Tues., & Thurs.**
Prerequisites/requisites	**Department approval**
Awarding institution	**Al-Isra University**
Faculty	**Science**
Department	**Chemistry**
Level of course	**fourth year**
Year of study and semester (s)	**2018/2019- Second semester**
Final Qualification	**Bachelor**
Other department(s) involved in teaching the course	**-**
Date of production/revision	

Course Instructors:

Name: Dr. Alaa M. Al-Ma'abreh
Degree: PhD in physical chemistry
Office No.: 4231
Office Hours: 10-11 Sun., 9:30-10:30 Mon., 12-1 Tus., 10:30-11:30 Wed. & 1-2 Thurs.
Email: alaamabreh@yahoo.com, alaa.almaabreh@iu.edu.jo

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

No specified text book

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

No references

Objectives (CEO): Maximum six brief educational goals.

1.	Acquiring the skills necessary to search for information.
2.	knowing scientific research methods.
3.	Mastering practical chemical techniques in laboratory.
4.	Performing laboratories safety rules.
5.	Mastering writing reports.
6.	Commitments to ethical principles in research

Intending Learning Outcomes (ILO's): Please write no more than 8 learning outcomes

	Intending Learning Outcomes (ILO's)	**Relationship to CEO**	**Contribution in Program PLOs**
1.	Student has skills necessary to search for information	**1**	**i**
2.	Student be able to understand the principles of scientific research methods.	**2**	**F, h**
3.	Student be able to practice different types of laboratory techniques.	**3**	**e**
4.	Student be able to commits safety rules in laboratories.	**4**	**k**
5.	Student be able to write reports.	**5**	**g**
6.	Student be able to commits to the ethical principles of research.	**6**	**h**

Topic Outline and Schedule:

Topic	Weeks	Achieved ILOs	Evaluation Methods	Reference
Practicing at laboratory	(3/3)-(7/3)/2019	1	reports	-
	(10/3)-(14/3)/2019		reports	-
Practicing at laboratory	(17/3)-(21/3)/2019	2		
	(24/3)-(28/3)/2019			-
	(31/3)-(4/4)/2019			-
	(7/4)-(11/4)/2019			-
Practicing at laboratory	(14/4)-(18 /4)/2019	3 & 4		-
	(21/4)-(25/4)/2019			
	(28/4)-(2/5)/2019			-
	(5/5)-(9/5)/2019			
Practicing at laboratory	(12/5)- (16/5)/2019	5 & 6		-
	(19/5)-(23/5)/2019			
	(26/5)-(30/5)/2019			-
	(2/6)- (6 /6)/2019			
Final Exam	(9/6)- (13 /6)/2019		**Oral Presentation**	
	(16/6)-(20/6)/2019			

Teaching Methods and Assignments:

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

Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following <u>assessment methods and requirements</u>:

- **Reports**
- **Oral presentation**

Course Policies:

A- Attendance policies:

6 hours weekly at laboratory

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

Exam can retake based on approval of excuse from dean

Not handing assignment on time will result in zero mark

C- Health and safety procedures: NA

D- Honesty policy regarding cheating, plagiarism, misbehaviour:

Cheating, plagiarism, misbehaviour may result in zero grade

E- Grading policy:

- All homework's are posted on line
- All quizzes and exams are provided with solution for perfect score

F- Available university services that support achievement in the course: Labs, Software, Java and C#

Required equipment:

Assessment Plan for the Course Learning Outcome (just select):

first Written Exam.
Second Written Exam.
Final Written Exam.
Quizzes.
Homework.

- Integrative Projects.
- Case Study.

☑ Written Reports.

- Participation in Lecture.

☑ Oral presentation

Program Student Outcome (PLOs):

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

Responsible Persons and their Signatures:

Course Coordinator	**Dr. Alaa Al-Ma'abreh**	**Completed Date**	7/ 3 /2019
		Signature	

Received by (Department Head)	**Dr. Alaa Al-Ma'abreh**	**Received Date**	7/ 3 /2019
		Signature	