Philadelphia University
Faculty of Pharmacy
Department of Pharmaceutical Sciences
First Semester, 2017/2018

Course Syllabus

Course Title: Pharmaceutical Organic Chemistry laboratory (1)	**Course code:** 0510112
Course Level: first year	**Course Co-requisite (s):** Pharmaceutical Organic Chemistry (1)
Lecture Time: 13:10-15:10 Sun pm **14:15-16:15 Mon** pm **13:10-15:10 Tus** pm **14:15-16:15 wed** pm	**Credit hours:** 1 hours

Academic Staff Specifics

Name	Rank	Office Number and Location	Office Hours	E-mail Address
Dr.Mouhamad al-dhoun	Assistant Professor	510		maldhoun@philadelphia.edu.jo
Wafa hamdan	Instructor	413		whamdan@philadelphia.edu.jo

Course module description:
This course is complementary part to the theoretical lectures provided by the co-requisite course (0511121). The laboratory is divided into two parts; 1st part provides an adequate coverage of safety precautions and lab rules that students should strictly follow so that safety can be achieved in the lab and the experiments are designed to familiarize students with techniques commonly used in the organic laboratory. For identification, purification and separation of organic compounds. 2nd part includes chemical tests applied for identification of the main classes of organic compounds.

Course/ module components

- **Books (title , author (s), publisher, year of publication)**

1. Organic Chemistry: A Short Course. By Harold Hart, Leslie E. Craine, David J. Hart. Publisher: Houghton Mifflin College; 10th edition (January 1999) ISBN. 0395902258.
In addition to the above, the students will be provided with handouts by the lecturer**.**

- **Support material (s) ;**

Manual of Pharmaceutical Organic Chemistry laboratory (1)

- **Homework's;**

Suggested questions in Manual of Pharmaceutical Organic Chemistry laboratory (1)

Teaching methods:
Tutorial and laboratory sessions.

Learning outcomes:

- *Knowledge and understanding*

:

1. Learn the students various separation techniques including Recrystalization, Extraction
2. Learn the students Physical and chemical characteristics of organic compounds including determination of the solubility characteristics
3. Learn the students The mechanism of organic reactions
4. Learn the students various identification techniques including melting point determination.
5. Learn the students various identification tests for chemical compounds Extraction

- *Communication skills*

1-Adapt group discussion technique
2-learn the student the principle of team-work
3-Show respect for the students' opinion.

- *Practical and subject specific skills (Transferable Skills).*
  - Learn how to follow general policies and safety precautions in the lab.
  - Learn handling of glassware in the lab.
  - Learn how to deal with heat sources in the lab.
  - Learn different lab techniques as filtration, Decolorization, Drying and Reflux.

Assessment instruments

Allocation of Marks	
Assessment Instruments	**Mark**
Reports and evaluation	**30%**
Quizzes	**20%**
Practical exam	**10%**
Final examination	**40%**
Total	**100%**

Documentation and academic honesty

- Documentation style (with illustrative examples)

Taking standard cases, question and headlines from the textbook and other references with further elaborated and detailed during the laboratory.

Course/module academic calendar

week	**Basic and support material to be covered**	
(1)	Laboratory rules & safety precautions	
(2)	Physical and chemical characteristics of organic compounds including determination of the solubility characteristics	
(3)	Determination of melting point.	
(4)	Boiling point and Distillation.	
(5)	Recrystallization, a purification technique for solids	
(6)	Extraction, a separation and isolation technique	
(7)	Chemical tests for identification of alcohols	
(8)	Chemical tests for identification of aldehydes & ketones	
(9)	Chemical tests for identification of alkenes	
(10)	Final Examination	

Expected workload:

On average students need to spend 2 hours of study and preparation for each 50-minute lecture/tutorial.

Attendance policy:

Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Module references

Books;

1. Introduction to organic Chemistry (Study guide and Solutions Manual). By Andrew Streitwieser,Clayton H. Heathercock, Edward M. Cosower. Publisher: Prentice Hall College Div; (December 1998) ISBN: 0130129909.
2. Organic Chemistry. By T.W.Graham Solomons, 8th edition 2003.
3. British Pharmacopoeia, U.S. Pharmacopoeia National formulary. The Mark Index, the Martindale 3. Remington: The Science and Practice of Pharmacy. By Alfonso R. Gennaro (Editor) 20th edition (December 15, 2000) Lippincott,Williams and Wilkins: ISBN: 0683306472.

4. Organic chemistry 7th by John McMurry, edition 2008.

Websites;

Htt://www. Philadelphia.edu. jo/pharmacy/rescurces. Html