

## The University of Jordan

**Faculty:** Pharmacy

**Department:** Pharmaceutics and Pharmaceutical Technology

**Program:** BSc. of Pharmacy

**Academic Year/ Semester:** 2013/2014/ 1<sup>st</sup> semester

**Course Name (Course Number):** Physical Pharmacy –Practical (1202236)

<b>Credit hours</b>	1	<b>Level</b>	3 <sup>rd</sup> Year	<b>Co-requisite</b>	Physical Pharmacy (1202331)
<b>Coordinator/ Lecturer</b>		<b>Office number</b>		<b>Office phone</b>	
<b>Course website</b>		<b>E-mail</b>		<b>Place</b>	

### **Office hours:**

<b>Day/Time</b>	<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>

### **Course Description**

A practical course in physical pharmacy focusing on observing physicochemical phenomena at work in pharmaceutical dosage forms and systems

### **Learning Objectives**

1. To provide students with the practical laboratory skills of physical pharmacy.
2. To demonstrate the effect of the physico-chemical properties phenomena on pharmaceutical systems.
3. To clarify theoretical concepts learned in Physical Pharmacy (1202331).

### **Intended Learning Outcomes (ILOs):**

Successful completion of the course should lead to the following outcomes:

1. Knowledge and Understanding:
  - 1.1. The student is expected to know the general laboratory safety and basic techniques.
2. Intellectual skills (cognitive and analytical):

2.1. The student is expected to develop the ability to suggest suitable techniques to evaluate some physicochemical properties of drug molecules and dosage forms.

2.2. The student is expected to interpret scientific data and make sound scientific conclusions.

### 3. Subject specific skills

3.1. The student is expected to learn the use of basic instruments analysis and measurement instruments (Spectrophotometer, analytical balance, etc.).

3.2. The student is expected to know the measurement units and understand their conversions.

3.3. The student is expected to handle data in terms of graphical presentation and statistical analysis.

### 4. Transferable Skills

4.1. Team work.

4.2. Use oral communication to effectively transmit ideas and conclusions to a scientific audience

### **ILOs: Learning and Evaluation Methods**

<b>ILO/s</b>	<b>Learning Methods</b>	<b>Evaluation Methods</b>
	1. Discussion. 2. Experiments. 3. Home works and reports.	Exam, Quiz, assignments, ...

## Course Contents

Content	Reference *	Week	ILO/s **
<b><u>Subject</u></b>  1. Enthalpy Change of Solution  2. Determination of Distribution Coefficient of I <sub>2</sub> and Stability Constant of I <sub>2</sub> -KI complex  3. Binary Water- Phenol Mixture  4. Ternary Systems  5. Chemical Kinetics, Hydrolysis of Methyl acetate  <b>Mid-term exam</b>  6. Workshop, Chemical Kinetics  7. Transfer of Salicylic acid across Polymeric membrane  8. Critical Micelle Concentration  9. Solubilization  10. Adsorption isotherm			<u>1,2,3,4</u>

## Learning Methodology

1. Discussion.
2. Experiments.
3. Home works and reports.
4. Assignments and quizzes.

## Projects and Assignments

To be confirmed.

## **Evaluation**

Midterm exam	30% (6 <sup>th</sup> week)
Theoretical part	10%
Practical part	20%
Final exam	40% (11 <sup>th</sup> week)
Theoretical part	10%
Practical part	30%
Home works and reports	10% (During the semester)
Quizzes	10% (During the semester )
Evaluation	10 %

## **Main Reference/s:**

1. Lab Manual