

## The University of Jordan

**Faculty:** Pharmacy

**Department:** Pharmaceutics and Pharmaceutical Technology

**Program:** Pharmacy/PharmD

**Academic Year/ Semester:** 2013/2014- First Semester

**Course Name (Course Number):** Pharmaceutical Calculations and Compounding of Dosage Forms (1202230).

<b>Credit hours</b>	2 hours	<b>Level</b>	2 <sup>nd</sup> year	<b>Pre-requisite</b>	Physicochemical principles of pharmacy
<b>Coordinator/ Lecturer</b>				<b>E-mail</b>	
<b>Course website</b>				<b>Place</b>	

<b>Office hours</b>					
<b>Lecturer</b>	<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>

### Course Description

#### **A. Principles of Pharmacy Practice:**

1. Dispensing techniques (compounding and good practice).
2. Pharmaceutical calculations.
3. Packaging.
4. Storage and stability of medicines.
5. Labelling of dispensed medicines.

#### **B. Pharmaceutical Products:**

1. Routes of administration and dosage forms.
2. Solutions.
3. Suspensions.
4. Emulsions.
5. External preparations.
6. Suppositories and pessaries.
7. Powders and granules.
8. Oral unit dosage forms.
9. Parenteral products.

## 10. Ophthalmic products.

### **Learning Objectives**

- 1- To provide a sound base for all aspects of good pharmacy practice.
- 2- To provide the students with knowledge in calculations, formulation and extemporaneous dispensing, packaging, and storage of medicines.
- 3- To provide the students with knowledge in pharmaceutical dosage forms and routes of administration.

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

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

**A. Knowledge and Understanding:** Student is expected to

A1- To acquire knowledge of all aspects of extemporaneous dispensing.

A2- To understand the different routes of administration and dosage forms and their intended use.

**B. Intellectual Analytical and Cognitive Skills:** Student is expected to

B1- To apply knowledge of physical concepts when formulating extemporaneous formulations.

B2- To understand the use of excipients in a given formulae and to be able to predict the final obtained dosage form.

**C. Subject-Specific Skills:** Student is expected to

C1- Confidence in using different techniques which are fundamental to good compounding.

C2- Adequate correlation between theoretical principles and laboratory skills.

**D. Transferable Key Skills:** Students is expected to

D1- Good pharmacy practice

D2- Selection of proper equipment and the application of correct manipulative techniques, as well as selection of suitable excipients for the prepared dosage form.

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

<b>ILO/s</b>	<b>Learning Methods</b>	<b>Evaluation Methods</b>
	Lectures, Discussions and workshops	Exams and Quizzes

### **Evaluation**

<b>Evaluation</b>	<b>Point %</b>	<b>Date</b>
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<b>Midterm Exam</b>	30%	To be announced
<b>Quiz 1</b>	10%	Week 7 (to be confirmed)
<b>Quiz 2</b>	10%	Week 12 (to be confirmed)
<b>Final Exam</b>	50%	To be announced

**Main Reference/s:**

1. Pharmaceutical Practice, A.J. Winfield, J.A. Rees and I.Smith. 4<sup>th</sup> edition, 2009. Published by Churchill Livingstone.
2. Pharmaceutical Practice, A.J. Winfield and R.M.E. Richards. 3<sup>rd</sup> edition, 2004. Published by Churchill Livingstone.
3. Pharmaceutics: the science of dosage form design, Aulton M.E. 2<sup>nd</sup> edition, 2002. Published by Churchill Livingstone.
4. Pharmaceutical dosage forms and drug delivery systems, Ansel H.C., Popovich N.G., Allen L.V. 7<sup>th</sup> edition, 2000. Published by Williams and Wilkins.