



كلية الصيدلة جامعة الزيتونة الأردنية  
Faculty of Pharmacy  
Al-Zaytoonah University of Jordan  
" نحو تعليم صيدلاني متميز "

Toward Excellence in Pharmaceutical  
Education

جامعة الزيتونة الأردنية  
Al-Zaytoonah University of Jordan  
كلية الصيدلة  
Faculty of Pharmacy



"Tradition and Quality"

<b>Detailed Course Description - Course Plan Development and Updating Procedures/ Pharmacy Department</b>	<b>QF02/0408-3.0E</b>
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Faculty	Pharmacy	Department	Pharmacy
<b>Course number</b>	0201542	Course title	Pharmaceutical Technology Laboratory
Number of credit hours	3	Pre-requisite/co- requisite	Industrial Pharmacy

### Brief course description

Pharmaceutical technology is one of the most important subject in pharmaceutical sciences and deals with preparation of various dosage forms by variety of techniques on laboratory scale as well as on large scale and their in-process and out process (final) evaluation. "Pharmaceutical technology: discusses the techniques used in manufacturing and evaluation of different dosage forms in simple and easy to understand manner with the support of theory and experiments. The basic pharmaceutical techniques for manufacturing of conventional dosage forms (milling, particle size analysis, mixing, powder flow ability, granules, quality control of solid dosage forms tablets and capsules: disintegration, dissolution, hardness, friability weight variation, content uniformity, tablets coating).

<b>Course goals and learning outcomes</b>	
<b>Goal 1</b>	Developing the skills of employing the equipments for the specified application(s)
Learning outcomes	The student should be able to 1.1. Name the instruments used in the experiment (sometimes with their brand name) 1.2. Specify the uses of the instruments and relate it to the right industrial stage
<b>Goal 2</b>	Acquiring the skills to analyze the generated data from the experiments and subsequently the constructions of decisions based on those data
Learning outcomes	The student should be able to 3.1. Analyze the generated data form the instrument 3.2. Conduct the proper calculations and transform them into the right plot 3.3.
<b>Goal 3</b>	Developing knowledge for quality control testing and Good manufacture practice (GMP)
<b>Textbook</b>	1.- 2.-
<b>Supplementary</b>	1.-



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references	2.- 3.-
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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1	Milling and Particle Size Analysis		
	1			
	1			
02	1	Mixing of powders		
	1			
	1			
03	1	Flow of Powders and Granules		
	1			
	1			
04	1	Granulation: Effect of Binders on Granules Characteristics, Drying: Effect of Temperature and Granule Size on Drying Rate		
	1			
	1			
05	1			
	1			
	1			
06	1	Quality Control of Tablets: Friability, Hardness, Disintegration, Weight Variation		
	1			
	1			
07	1	Quality Control of Tablets: dissolution of tablets		
	1			
	1			
08	1	Quality Control of Tablets: uniformity of drug content		
	1			
	1			
09	1	Tablet and Granules Coating		
	1			
	1			
10	1			
	1			
	1			
11	1			
	1			
	1			
12	1			
	1			
	1			
13	1			
	1			
	1			



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	<b>1</b>			
	<b>1</b>			
<b>14</b>	<b>1</b>			
	<b>1</b>			
	<b>1</b>			
<b>15</b>	<b>1</b>			
	<b>1</b>			
	<b>1</b>			
<b>16</b>	<b>1</b>			
	<b>1</b>			
	<b>1</b>			

<b>Theoretical course evaluation methods and weight</b>	First exam 25% Second exam 25% Final exam 50%	<b>Practical (clinical) course evaluation methods</b>	Semester students' work = 50% (Reports, research, quizzes, etc.) Final exam = 50%
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<b>Approved by head of department</b>		<b>Date of approval</b>	
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Extra information (to be updated every semester by corresponding faculty member)

<b>Name of teacher</b>		<b>Office Number</b>	
<b>Phone number (extension)</b>		<b>Email</b>	<a href="mailto:_____@zug.edu.jo">_____@zug.edu.jo</a>
<b>Office hours</b>			