



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  
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"Tradition and Quality"

Detailed Course Description - Course Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-3.0E
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Faculty	Pharmacy	Department	Pharmacy
Course number	0201321	Course title	Pharmaceutics 3
Number of credit hours	2	Pre-requisite/co-requisite	Pharmaceutics 2

### Brief course description

#### This course:

1. Teaches different types of topical and systemic dosage forms, including; semisolids, transdermal patches, suppositories and sterile preparations.
2. Aims to focus on differentiation between dosage forms with respect to their characteristics, methods of preparation, ingredients, uses and advantages over other dosage forms.
3. Provides knowledge on the ingredients and raw materials that are involved in the specific dosage forms
4. Provides scientific knowledge on different methods and techniques employed in the preparation of these dosage forms.

Course goals and learning outcomes	
<b>Goal 1</b>	Acquiring knowledge regarding topical and systemic dosage forms such as semisolids (gels, pastes, ointments and cream), suppositories and sterile preparations.
Learning outcomes	The student should be able to 1. Define and identify various characteristic properties of pharmaceutical preparations 2. Specify the indications of various dosage forms in the medical field.
<b>Goal 2</b>	Acquiring the knowledge regarding preparation of the pharmaceutical products
Learning outcomes	The student should be able to: 1. Prepare various topical dosage forms, suppositories. 2. Specify the proper ware and environment for preparations. 3. Select proper packaging for the finished products.
<b>Goal 3</b>	Acquire knowledge regarding labelling, patient advice and counselling
Learning outcomes	The student should learn to: 1. Write concise clear labelling of the finished product. 2. Employ the knowledge of physicochemical properties in advising the patient on proper use of the product. 3. The student should appreciate pharmacist patient communication at this stage.
<b>Textbook</b>	1- Ansel's pharmaceutical dosage forms and drug delivery systems. 10 <sup>th</sup> ed, 2014 Pharmaceutical practice, A.J. Winfield, R.M.E Richard , 4 <sup>th</sup> edition, 2009 2-Pharmaceutics. The Design and Manufacture of Medicines, by: M. E. Aulton. fourth edition , 2007
<b>Supplementary references</b>	1-British Pharmacopeia, 2010. 2-Remington's: The science and practice of Pharmacy, 21 <sup>st</sup> ed, 2006.



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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1 1	<ul style="list-style-type: none"> <li>Semisolid dosage forms :</li> <li>Introduction, Definitions and Classes</li> </ul>		
02	1 1	<ul style="list-style-type: none"> <li>Ointments: Bases, Classifications, Properties and Examples</li> </ul>		
03	1 1	<ul style="list-style-type: none"> <li>Ointments: Bases, Classifications, Properties and Examples</li> </ul>		
04	1 1	<ul style="list-style-type: none"> <li>Creams, Pastes, Gels and examples of transdermal delivery system (continued)</li> </ul>		
05	1 1	<ul style="list-style-type: none"> <li>Percutaneous absorption: Routes of penetration, Factors affecting skin penetration, percutaneous absorption techniques (in-vivo and in-vitro), formulation, dilution, evaluation tests, methods of preparation and packaging.</li> </ul>		
06	1 1	<ul style="list-style-type: none"> <li>Percutaneous absorption: Routes of penetration, Factors affecting skin penetration, percutaneous absorption techniques (in-vivo and in-vitro), formulation, dilution, evaluation tests, methods of preparation and packaging. (continued)</li> </ul>		
07	1 1	<ul style="list-style-type: none"> <li>Suppositories: Definitions, Types, Reasons for suppository administration.</li> </ul>		
08	1 1	<ul style="list-style-type: none"> <li>Factors affecting drug absorption from the rectum, Properties of ideal suppository bases and Types of suppository bases</li> </ul>		
09	1 1	<ul style="list-style-type: none"> <li>Methods of preparation of suppositories, Determination of displacement value, formulation parameters, quality control of suppositories, packaging and storage, rectal formulations other than suppositories, vaginal drug delivery.</li> </ul>		
10	1 1	<ul style="list-style-type: none"> <li>Gels in pharmaceuticals</li> </ul>		
11	1 1	<ul style="list-style-type: none"> <li>Ophthalmic preparations: Classification, Formulation and Requirements</li> </ul>		



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12	1 1	▪ Ophthalmic preparations: Classification, Formulation and Requirements. (continued)		
13	1 1	▪ Preparation of eye drops, containers for eye drops, formulations of eye lotions, formulation of eye ointments and containers, ophthalmic inserts, contact lenses.		
14	1 1	▪ Parenteral preparation :- Advantages , Routes of administration		
15	1 1	▪ Formulations, Requirements of parenteral solutions, Special injections, large volume parenteral products.		
16	1 1	▪ Pyrogens: Definition, Characters, sources, Removal and Pyrogens test		

<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>	Dr Abdul Qader Al-Bawab	<b>Date of approval</b>	15/10/2017
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Extra information (to be updated every semester by corresponding faculty member)

<b>Name of teacher</b>	Dr. Ola A. Tarawneh	<b>Office Number</b>	215
<b>Phone number (extension)</b>		<b>Email</b>	<a href="mailto:ola.tarawneh@zuj.edu.jo">ola.tarawneh@zuj.edu.jo</a>
<b>Office hours</b>			