



الجامعة الزيتونة الأردنية
Faculty of Pharmacy
Al-Zaytoonah University of Jordan

" نحو تعليم صيدلاني متميز "
Toward Excellence in Pharmaceutical
Education

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



" 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	201791	Course title	Selected Topics in Pharmaceutics
Number of credit hours	3	Pre-requisite/co-requisite	-

Brief course description

This course provides students in depth with oral delivery as the most common route of administration and drug delivery systems used in this route. In addition, this course will cover different topics on alternative routes of administration (pulmonary, nasal, ocular, parenteral, and transmucosal). Furthermore, this course will cover topics on stability of pharmaceutical formulations. Moreover, this course will introduce students to biopharmaceuticals used for drug delivery.

Course goals and learning outcomes	
Goal 1	To introduce students to oral route of administration
Learning outcomes	1.1 Describe the oral route as the most common route of drug administration
Goal 2	To introduce student to alternative routes of drug administration (pulmonary, nasal, parenteral, ocular, and transmucosal (buccal, vaginal, and rectal) and their delivery systems.
Learning outcomes	2.1 Define alternative routes of administration 2.2 Describe the drug delivery systems used in each route and drug targeting
Goal 3	To introduce students to stability of pharmaceutical dosage forms
Learning outcomes	3.1 Define degradation pathways in pharmaceutical formulation 3.2 describe stability testing and the latest international regulatory requirements on drug stability.
Goal 4	Introduce students to medical drugs produced using biotechnology. These include proteins (including antibiotics) and nucleic acids (DNA and RNA).
Learning outcomes	4.1 Focus on the discovery and development of biopharmaceuticals, therapeutic peptides, protein, monoclonal antibodies and nucleic acids.
Textbook	1.- Aulton's Pharmaceutics: The Design and Manufacture of Medicines, by: M. E. 2.- Aulton and K. M. G. Taylor. 4 th Edition. 2013. Churchill Livingstone



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Supplementary references	Selected research articles
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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1 1 1	Oral delivery		
02	1 1 1	Oral delivery		
03	1 1 1	Topical and transdermal delivery as an alternative route of administration		
04	1 1 1	Pulmonary delivery as an alternative route of administration		
05	1 1 1	Ocular delivery as an alternative route of administration		
06	1 1 1	Nasal delivery as an alternative route of administration		
07	1 1 1	Midterm		
08	1 1 1	Parenteral delivery as an alternative route of administration		
09	1 1 1	Transmucosal (buccal, vaginal, and rectal) as an alternative route of administration		
10	1 1 1	Stability of pharmaceutical dosage forms		
11	1 1 1	Biopharmaceuticals		
12	1 1 1	Biopharmaceuticals		
13	1	Seminars		



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14	1 1 1	Seminars		
15	1 1 1	Seminars		
16	1 1 1	Final exam		

Theoretical course evaluation methods and weight	Midterm exam 30% Seminar 30% Final exam 40%	Practical (clinical) course evaluation methods	Semester students' work = 50% (Reports, research, quizzes, etc.) Final exam = 50%
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Approved by head of department		Date of approval	
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Extra information (to be updated every semester by corresponding faculty member)

Name of teacher	Dr. Rania Hamed	Office Number	225
Phone number (extension)	299	Email	rania.hamed@zuj.edu.jo
Office hours	Sunday till Thursday 11-12 pm		