



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"

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	201422	Course title	Biopharmaceutics & Pharmacokinetics Lab
Number of credit hours	1	Pre-requisite/co-requisite	Pharmaceutics Lab

Biopharmaceutics & Pharmacokinetics Lab prepare student to understand the kinetics of drug absorption, distribution, and elimination (ie, metabolism and excretion) ,to describe how biopharmaceutics affects drug product performance and how pharmacokinetics is related to pharmacodynamics and drug toxicity.

Course goals and learning outcomes	
Goal 1	Initiate drug dosing regimens individualized to specific patient demographics and organ function
Learning outcomes	Students able to : 1.1 Evaluate doses and dosage adjustment according to the therapeutic window of the drug. 1.2 Understand bioavailability and bioequivalence. 1.3 Develop appropriate therapeutic dosing regimens.
Goal 2	Interpret drug serum concentration data.
Learning outcomes	Students able to : 2.1 Understand the concepts of rate and order of processes 2.2 Handle the semi-log and standard graph papers, and distinguish the resulted curves generated by ordered processes, and ability to calculate slopes and intercepts. 2.3 Calculate different parameters such as clearance, volume of distribution, area under the curve
Goal 3	Prepare student to recognize sources of individual pharmacokinetic variability due to physiological and disease factors.
Learning outcomes	Students able to : 3.1 Understand of the appropriate application and limitations of select pharmacokinetic models. 3.2 Understand the application and role of pharmacokinetic and information generated for selected drugs and drug classes. 3.3 Calculate different parameters such as clearance, volume of distribution, area under the curve



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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1 1 1	General Introduction: Mathematical Fundamentals	3-9	
02	1 1 1	Revision of rate and order concepts, Use of graph papers.	10-15	
03	1 1 1	One compartment IV bolus-single dose	16-19	
04	1 1 1	Calculation of K from urinary excretion data	19-23	
05	1 1 1	Tutorial	-	
06	1 1 1	Two compartment IV bolus-single dose	24-28	
07	1 1 1	One compartment IV infusion-single dose	29-32	
08	1 1 1	One compartment oral dosage form-single dose	33-42	
09	1 1 1	Multiple dosage regimen: repetitive IV bolus	43-46	
10	1 1 1	Renal and hepatic clearance + Bioavailability	47-53	

Theoretical course evaluation methods and weight	First exam 25% Second exam 25% Final exam 50%	Practical (clinical) course evaluation methods	Semester students' work = 50% (Reports, research, quizzes, etc.)
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			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	MSc. Ameerah Ibrahim	Office Number	409
Phone number (extension)	273	Email	ameerah.ibrahim@zug.edu.jo
Office hours	Sun.(12:00-1:30) Mon.(10-11) Tue (11-2) Wed.(11-1)		