



Course Detailed Description – Procedures of the Course Plan Committee /Faculty of Pharmacy

QF02/0408–1.0

Department	Pharmacy
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Course Name	Biopharmaceutics & Pharmacokinetics Lab	Course No.	201422
Prerequisite	Pharmaceutics Lab	Credit Hours	201329
Number & date of course plan approval		Brief Description	See form QF02/0409

Intended Learning Outcomes	<p>At the end of this course, student will be able to:</p> <ol style="list-style-type: none"> 1. Understand the concepts of rate and order of processes 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 3. Calculate different parameters such as clearance, volume of distribution, area under the curve. 4. Evaluate doses and dosage adjustment according to the therapeutic window of the drug 5. Understand bioavailability and bioequivalence 		
Course Topics	<ol style="list-style-type: none"> 1.rates and orders 2. pharmacokinetic compartment models 3.kinetics of intravascular route 4. kinetics of extravascular route 5.organ clearance 6. bioavailability 7. nonlinear kinetics 		
Text Books	Accompanying laboratory manual.		
References	Applied biopharmaceutics and pharmacokinetics, shargel, 5th edition		
Grade Determination	<input type="checkbox"/> 1 st Exam = 25% <input type="checkbox"/> 2 nd Exam = 25% <input type="checkbox"/> Final Exam = 50%	<input type="checkbox"/> Practical Course Grade Determination	<input type="checkbox"/> Course Work = 50% (Reports, Term Papers, Quizes) <input type="checkbox"/> Final Exam = 50%



Course Outline				
Week	Hours	Subjects	Chapters in Textbook	Notes
1	1	General Introduction: Mathematical Fundamentals	Experiment 1	
2	1	Revision of rate and order concepts, Use of graph papers.	Experiment 2	
3	1	One compartment IV bolus-single dose	Experiment 3	
4	1	Two compartment IV bolus-single dose	Experiment 4	
5	1	One compartment IV infusion-single dose	Experiment 5	
6	1	One compartment oral dosage form-single dose	Experiment 6	
7	1	Tutorial		
8	1	Multiple dosage regimen: repetitive IV bolus	Experiment 7	
9	1	Multiple dosage regimen: intermittent IV infusion	Experiment 8	
10	1	Multiple dosage regimen: Multiple oral dose regimen	Experiment 9	
11	1	Clearance(total & renal)	Experiment 10	
12	1	Clearance(total & hepatic)	Experiment 11	
13	1	Dose adjustment in renal and hepatic diseases	Experiment 12	
14	1	Bioavailability	Experiment 13	
15	1	Tutorial		
16	1	Application of pharmacokinetics in clinical situations	Experiment 14	

Approved by Dept. Chair		Date of Approval	
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Extra Information: (Updated every semester and filled by course instructor)

Course Instructor	Dr. Suhair Hikmat
Office No.	
Extension Email	
Office hours	