



**Jordan University of Science and Technology**  
**Faculty of Pharmacy**  
**Doctor Of Pharmacy (Pharm D.) Department**

PHMD456 Biopharmaceutics And Pharmacokinetics (For Pharm D Students)

Second Semester 2020-2021

**Course Catalog**

3 Credit Hours. This course (3.0 credits) includes a study of the physicochemical and biological factors involved in the absorption, distribution, and elimination of drugs as well as method of calculating drug levels in blood and urine after single or multiple dosing by extravascular or intravenous routes. In addition to the concepts of bioavailability and bioequivalence.

**Text Book**

<b>Title</b>	Applied Biopharmaceutics and Pharmacokinetics
<b>Author(s)</b>	Shargel and Yu
<b>Edition</b>	7th Edition
<b>Short Name</b>	1
<b>Other Information</b>	2016

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
2	Pharmacokinetics	M. Gibaldi and D. Perrier	2nd Edition	

**Instructor**

<b>Name</b>	<b>Dr. Ruba Darweesh</b>
<b>Office Location</b>	M5-L0
<b>Office Hours</b>	Sun : 12:00 - 13:00 Sun : 14:30 - 15:30 Mon : 13:00 - 14:00 Tue : 12:00 - 13:00 Tue : 14:30 - 15:30 Wed : 13:00 - 14:00
<b>Email</b>	rsdarweesh@just.edu.jo

**Class Schedule & Room**

Section 1:

Lecture Time: Sun, Tue : 13:00 - 14:30

Room: منصة الكترونية

Section 2:

Lecture Time: Mon, Wed : 11:30 - 13:00

Room: منصة الكترونية

**Tentative List of Topics Covered**

Weeks	Topic	References
Week 1	Introduction to biopharmaceutics and pharmacokinetics:	From 1
Week 2	Mathematical fundamentals in pharmacokinetics:	From 1
Weeks 3, 4, 5	One-compartment open model: Intravenous bolus administration:	From 1
Week 6	Drug elimination and clearance concepts:	From 1
Weeks 7, 8, 9	Pharmacokinetics of oral absorption:	From 1
Week 9	Bioavailability and bioequivalence	From 1
Weeks 10, 11, 12	Intravenous infusion	From 1
Weeks 13, 14, 15	Multiple dosage regimens	From 1
Weeks 15, 16	Nonlinear pharmacokinetics	From 1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Apply the basic principles of in vivo drug kinetics for both linear and nonlinear behaviors.	25%	
Determine factors affecting the drug onset and duration of actions.	25%	
Use the principles of bioavailability and bioequivalence.	25%	
Solve different pharmacokinetics problems by understanding possible factors that are affecting different pharmacokinetics parameters and variables.	25%	

**Relationship to Program Student Outcomes (Out of 100%)**

SO1.1	SO2.1	SO3.2	SO3.3	SO2.2	SO2.3	SO2.4	SO3.1	SO3.4	SO3.5	SO3.6	SO4.1	SO4.2	SO4.3	SO4.4

**Evaluation**

Assessment Tool	Weight
Midterm exam	50%
Final exam	50%