



Jordan University of Science and Technology

Faculty of Pharmacy

Pharmacy Department

PHAR354 Pharmaceutics(2)

Second Semester 2022-2023

Course Catalog

3 Credit Hours. - This course introduces students to the basics of physicochemical principles such as rheology, phase equilibria, interfacial phenomena and colloids. - Based on the previous description, the course also deals with applications of these physicochemical principles in the design of suspensions, emulsions, aerosols, dermatological and rectal route preparations.

Text Book

Title	Pharmaceutical Dosage Forms and Drug Delivery Systems
Author(s)	Loyd V. Allen, Jr. & Howard C. Ansel
Edition	10th Edition
Short Name	Ref 2
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref 1	Martin's Physical Pharmacy and Pharmaceutical Sciences	Patrick J. Sinko	6th Edition	or 5th

Instructor

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Office Hours	
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Instructor

Name	Prof. Khouloud Alkhamis
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Class Schedule & Room

Section 1:
Lecture Time: Sun, Tue, Thu : 08:30 - 09:30
Room: P1103

Section 2:
Lecture Time: Sun, Tue, Thu : 10:30 - 11:30
Room: P1103

Section 3:
Lecture Time: Mon, Wed : 10:00 - 11:30
Room: P1102

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Rheology	
Weeks 2, 3	Phase Equilibrium and Phase Rule	
Week 4	Interfacial Phenomena	
Week 5	Interfacial phenomena	
Week 6	Interfacial phenomena	
Week 6	Colloidal dispersions	
Week 7	Colloidal dispersions	
Week 8	Colloidal dispersions	
Week 8	Coarse dispersions	
Week 9	Coarse dispersions	
Week 10	Coarse dispersions	
Week 10	Semisolid dosage forms	
Week 11	Semisolid dosage forms	
Week 12	Semisolid dosage forms	
Week 12	Rectal and vaginal dosage forms	
Week 13	Rectal and vaginal dosage forms	
Week 14	Pharmaceutical aerosols	

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Differentiate between various systems in terms of rheology, and applications in pharmaceutical sciences. [1PLO1.1]	7%	
Discuss the phase rule and its applications to different systems containing multiple components. [1PLO1.1]	7%	
Define the interfacial phenomena, and adsorption at the interfaces including their application in pharmacy. [1PLO1.1]	14%	
Differentiate between different colloids including their optical, kinetic, and electrical properties that are essential in the stabilization of colloidal systems. [1PLO1.1]	7%	
Discuss the concepts of pharmaceutical suspensions and emulsions, factors that affect their stability, and describing approaches used in preparing physically stable formulations [1PLO1.1]	21%	
Describe the basic principles for the formulation of semisolid dosage forms including the basics of transdermal drug delivery systems. [1PLO5.1]	24%	
Describe physiological requirements and outline procedures used in the formulation of suppositories. [1PLO5.1]	12%	
Describe aerosol dispensers and the most common types of aerosol formulations and compare between their manufacturing methods. [1PLO5.1]	8%	

Relationship to Program Student Outcomes (Out of 100%)															
PLO1.1	PLO2.1	PLO3.2	PLO3.3	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1
56															44

Evaluation	
Assessment Tool	Weight
First Exam	25%
Quiz 1	5%
Quiz 2	5%
Final Exam	40%
Second Exam	25%

Policy

Exams	<ul style="list-style-type: none"> - All exams are closed books and notes. - The final exam comprehensive (covers all the material). - The first and second incomplete exams need approval from the department's head. - The final incomplete exam needs approval from the Dean.
Cheating	<p>Prohibited: The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied</p> <p>المادة 7: إذا ضبط الطالب أثناء الامتحان أو الاختبار متلبساً بالغش فتوقع عليه العقوبات التالية مجتمعة</p> <p>أ- اعتباره راسباً في ذلك الامتحان أو الاختبار</p> <p>ب- الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل</p> <p>ج- فصله من الجامعة لمدة فصل دراسي واحد، و هو الفصل التالي للفصل الذي ضبط فيه</p>
Attendance	<ul style="list-style-type: none"> - Attendance is mandatory and will be recorded regularly. - Excellent attendance is expected. - Students who miss more than 20% of the classes will be dropped from the course as per JUST policy. - If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Active learning and students' participation	<ul style="list-style-type: none"> - Students are expected to actively participate in class discussions. - Students are expected to read and study a research article (will be given by the instructor). Questions related to the article will be included in the second exam.
Withdraw	The last day of courses withdrawal (without reimbursement of tuition fees) is 2/6/2023

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