



Jordan University of Science and Technology

Faculty of Pharmacy

Pharmacy Department

PHAR758 Drug Stability - JNQF Level: 6

First Semester 2023-2024

Course Catalog

3 Credit Hours. A comprehensive course encompasses the study of parameters affecting the stability, efficiency, and safety of dosage forms. These parameters include drug polymorphs, pH and pH rate profiles, prodrugs, drug analogs, and additive interactions.

Teaching Method: On Campus

Text Book

Title	Chemical stability of Pharmaceuticals
Author(s)	Connors, Kenneth A; Amidon, Gordon L; Stella, Valentino J
Edition	2nd Edition
Short Name	Chemical stability of Pharmaceuticals
Other Information	John Wiley & sons

Course References

Short name	Book name	Author(s)	Edition	Other Information
Drug stability: principles and practices	Drug stability: principles and practices	Jens T. Carstensen, C.T. Rhodes.	3rd Edition	Marcel Dekker

Instructor

Name	Prof. Bashar Altaani
Office Location	P2 L1
Office Hours	Sun : 08:00 - 08:30 Sun : 09:30 - 10:30 Mon : 08:00 - 08:30 Mon : 10:00 - 11:30 Wed : 08:00 - 08:30 Wed : 10:00 - 10:30 Thu : 08:00 - 08:30 Thu : 09:30 - 10:30
Email	altaani@just.edu.jo

Class Schedule & Room

Section 2:
Lecture Time: Sun, Thu : 11:30 - 13:00
Room: U

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Introduction, stability kinetics	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices
Weeks 2, 3	Degradation of drug on aqueous solution	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices

Weeks 4, 5, 6	Interpretation of kinetics results	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices
Weeks 7, 8	Hydrolysis of pharmaceuticals	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices
Weeks 9, 10	Drug oxidation	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices
Weeks 11, 12	Photolysis	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices
Weeks 13, 14	Solid state stability	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices
Weeks 15, 16	Stability testing of pharmaceutical products	From Chemical stability of Pharmaceuticals , From Drug stability: principles and practices

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Predict the stability of drug structure [1PLO4.3, 1PLO4.4, 1PLO5.1][1L6K1, 1L6S1, 1L6S3, 1L6C2, 1L6C4]	30%	
Stabilize a pharmaceutical product [1PLO2.4, 1PLO3.1, 1PLO3.4][1L6K1, 1L6S1, 1L6C1, 1L6C3, 1L6C5]	30%	
Perform stability study [1PLO4.2, 1PLO4.3, 1PLO4.4, 1PLO5.1][1L6S3, 1L6C2, 1L6C4, 1L6C5]	20%	
Interpret and analyze the results of stability studies. [1PLO4.2, 1PLO4.3, 1PLO4.4, 1PLO5.1][1L6K2, 1L6S2, 1L6C1, 1L6C4]	10%	
Understand the different pathways of drug degradation [1PLO1.1, 1PLO2.4, 1PLO3.1, 1PLO3.4][1L6K2, 1L6S3, 1L6C2]	10%	

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
2.5						12.5	12.5	12.5				7.5	17.5	17.5	17.5

Relationship to NQF Outcomes (Out of 100%)										
L6K1	L6K2	L6S1	L6S2	L6S3	L6C1	L6C2	L6C3	L6C4	L6C5	
12	5.83	12	2.5	14.33	8.5	14.33	6	13.5	11	

Evaluation	
Assessment Tool	Weight
Mid Term Exam	20%
Articles and guidelines presentations	15%
Project (term paper) preparation and presentation	15%
Final Exam	50%

Policy	
Exams	- All exams are closed books and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the Dean of the School or department head. - The format for the exams is generally (but NOT always) as follows: short essay questions and some multiple-choice questions
Makeup Exams	- Make up exams should not be given unless there is a real valid excuse.
Cheating	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 المادة 7: إذا ضبط الطالب أثناء الامتحان أو الاختبار متلبساً بالغش فتوقع عليه العقوبات التالية: مجتمعة: أ- اعتباره راسباً في ذلك الامتحان أو الاختبار. ب- إلغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل. ج- فصله من الجامعة لمدة فصل دراسي واحد، و هو الفصل التالي للفصل الذي ضبط فيه.

Attendance	<ul style="list-style-type: none">- Excellent attendance is expected.- JUST policy requires the faculty member to assign a ZERO grade (35) if a student misses 10% of the classes that are not excused.- If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Workload	<ul style="list-style-type: none">- Student on average is expected to spend 6 hours/week.

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