

Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E
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Study Plan No.	2021/2022	University Specialization	Bachelor of Pharmacy
Course No.	0201224	Course Name	Pharmaceutical Dosage Forms (1)
Credit Hours	2	Prerequisite *Co-requisite	Pharmaceutics
Course Type	<input type="checkbox"/> Mandatory University Requirement <input type="checkbox"/> University Elective Requirement	<input type="checkbox"/> Faculty Mandatory Requirement <input type="checkbox"/> Support course family requirements	<input type="checkbox"/> Mandatory Requirement <input type="checkbox"/> Elective Requirement
Teaching Style	<input type="checkbox"/> Full Online Learning	<input checked="" type="checkbox"/> Blended Learning	<input type="checkbox"/> Traditional Learning
Teaching Model	<input type="checkbox"/> 1 Synchronous: 1 Asynchronous	<input checked="" type="checkbox"/> 1 Face to Face: 1 Asynchronous	<input type="checkbox"/> 2 Traditional

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)					
Name	Academic rank	Office No.	Phone No.	E-mail	
Office Hours (Days/Time)	Sunday, Tuesday, Thursday ()		Monday, Wednesday ()		
Division number	Time	Place	Number of Students	Teaching Style	Approved Model
				Blended Learning	1 Face to Face: 1 Asynchronous

Brief Description

Provide students with knowledge about different dosage forms, their formulations, packaging, labeling, and storage.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	Reference 1: Aulton's Pharmaceutics; The Design and Manufacture of Medicines, by: M. E. Aulton. Fourth Edition. 2013. Churchill Livingstone, Elsevier.			
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	Reference 2: Pharmaceutical Practice; by A. J. Winfield, J.A. Rees, and I. Smith. Fourth Edition. 2009. Churchill Livingstone, Elsevier.			
Supporting Websites	-			
The Physical Environment for Teaching	Classroom	Labs	Virtual Educational Platform	Others
Necessary Equipment and Software	Moodle			
Supporting People with Special Needs	-			
For Technical Support	E-Learning & Open Educational Resources Center			

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Course learning outcomes (*K= Knowledge, S= Skills, C= Competencies*)

No.	Course Learning Outcomes	The Associated Program Learning Output Code
Knowledge		
The student should be able to:		
K1	Identify the different dosage forms available in the pharmacy	MK2
K2	Recognize the best storage conditions for each dosage form	MK2
K3	Discuss the best packaging system for various drugs	MK2
K4	Outline different possible rout of administration for various drugs	MK2
Skills		
The student should be able to:		
S1	Relate the best dosage form that can secure each kind of drugs	MS2
S2	Predict the best container that can reserve each drug for its shelf life	MS2
Competencies		
The student should be able to:		
C1	Develop his/her professional and personal performance by continuously following-up lectures, submitting tasks on time, and staying up to date with the latest nursing implications.	MC4

Mechanisms for Direct Evaluation of Learning Outcomes

Type of Assessment / Learning Style	Fully Electronic Learning	Blended Learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm Exam	30%	30%	30%	0%
Participation / Practical Applications	0%	0%	20%	50%
Asynchronous Interactive Activities	20%	20%	0%	0%
Final Exam	50%	50%	50%	50%

Note 1: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, and work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Note 2: According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student).

Schedule of Simultaneous / Face-to-Face Encounters and their Topics

Week	Subject	Learning Style*	Reference ** (Pages in Course Book)
1	Inroduction to Pharmaceutics	Lecture	1-5

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2	Definition of routes of drug administration Definitions of different pharmaceutical dosage forms and drug delivery systems.	Lecture	1-19 Ref. 1, Ch. 1 211-218 Ref. 2, Ch. 21
3	Solutions: Advantages and disadvantages as dosage form	Lecture	395-405 Ref.1, Ch. 24 337-346 Ref. 2, Ch. 30
4	Solutions: Solvents used in the preparation of aqueous solutions, classifications, and examples.	Lecture	395-405 Ref.1, Ch. 24 337-346 Ref. 2, Ch. 30
5	Suspensions: Factors affecting sedimentation rate, types of thickening agents	Lecture <i>flipped learning</i>	416-434 Ref. 1, Ch. 26 347-353 Ref. 2, Ch. 31
6	Suspensions: flocculated and deflocculated suspensions, preparation, and evaluation.	Lecture <i>flipped learning</i>	416-434 Ref. 1, Ch. 26 347-353 Ref. 2, Ch. 31
7	Emulsions: Pharmaceutical applications	Lecture <i>flipped learning</i>	435-464 Ref. 1, Ch. 27 356-363 Ref. 2, Ch. 32
8	Emulsions: Pharmaceutical applications		
9	Emulsions: types, surfactants and emulsifying agents Midterm Exam	Lecture	435-464 Ref. 1, Ch. 27 356-363 Ref. 2, Ch. 32
10	Emulsions: Pharmaceutical applications, types, surfactants, methods of preparation and particular problems.	Lecture	435-464 Ref. 1, Ch. 27 356-363 Ref. 2, Ch. 32
11	Powders and granules: Advantages and disadvantages, applications and preparation.	Lecture	465-486 Ref. 1, Ch. 29 387-391 Ref. 2, Ch. 32
12	Packaging, storage, and stability of medicine: Definition of containers, types of contained, and primary and secondary packaging.	Lecture	504-549 Ref. 1, Ch. 33 and 34 393-398 Ref. 2, Ch. 36
13	Packaging, storage, and stability of medicine: Consideration in selecting a container, and patient pack dispensing	Lecture	811-851 Ref. 1, Ch. 47-49 305-313 Ref. 2, Ch. 27
14	Labeling of dispensed medicines: Requirements for labels, additional labels, and patient-specific labels.	Lecture	811-851 Ref. 1, Ch. 47-49 305-313 Ref. 2, Ch. 27

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15	Storage of medicines and waste disposal: Why medicines need to be stored correctly, rotation and date checking of stock, waste disposal of medicines and medicines stored in the refrigerator, and maintaining records of refrigerator temperatures.	Lecture	493-499 Ref. 2, Ch. 43
16	Final Exam		

* Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.

** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.

Schedule of Asynchronous Interactive Activities (in the case of e-learning and blended learning)

Week	Task / Activity	Reference	Expected Results
1	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
2	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
3	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
4	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
5	Self-study	A selected topic	Assignment
6	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
7	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
8	Self-study	A selected topic	Assignment
9	Midterm Exam	-	-
10	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
11	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
12	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
13	Self-study	A selected topic	Assignment

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14	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
15	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
16	Final Exam	-	-