Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E

Study Plan No.	**2021/2022**		**University Specialization**		**Bachelor of Pharmacy**	
Course No.	**0201371**		**Course Name**		**Dispensing Lab**	
Credit Hours	**1**		**Prerequisite *Co-requisite**		**Pharmaceutical Dosage Forms (1) + *Pharmaceutical Dosage Forms (2)**	
Course Type	☐ Mandatory University Requirement	☐ University Elective Requirement	☐ Faculty Mandatory Requirement	☐ Support course family requirements	☑ Mandatory Requirement	☐ Elective Requirement
Teaching Style	☐ Full Online Learning		☐ Blended Learning		☑ Traditional Learning	
Teaching Model	☐ 1 Synchronous: 1 Asynchronous		☐ 1 Face to Face: 1 Asynchronous		☑ 1 Traditional	

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**
				Traditional Learning	**1 Traditional**

Brief Description

This practical course is designed to introduce the students to the principles and procedures involved in bench scale compounding and dispensing of pharmaceutical dosage forms such as suspensions, emulsions, creams, ointments, gels, and suppositories. In addition to the practical skills, the students will develop an appreciation for patient education by writing a clear and concise label depicting the use and storage of dispensed medications.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	- Pharmaceutics and Compounding lab manual			
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	1. Aulton's Pharmaceutics; The Design and Manufacture of Medicines, by: M.E. Aulton. Third Edition. 2013. Churchill Livingstone. 2. Modern Pharmaceutics, vol.2, Applications and advances, A.T. Florence 3. The Theory and Practice of Industrial Pharmacy, by: Leon Lachman, Herbert A. Lieberman and Hoseph L. Kanig. Third Edition. 1986. 4. United States Pharmacopiea, 2010. 5. British Pharmacopeia, 2010. 6. Remington's Pharmaceutical Sciences, 2006.			
Supporting Websites				
The Physical Environment for	☐ Classroom	☑ Labs	☑ Virtual Educational	☐ Others

Teaching			**Platform**	
Necessary Equipment and Software	- Moodle.			
Supporting People with Special Needs				
For Technical Support	E-Learning & Open Educational Resources Center. Email: elearning@zuj.edu.jo; Phone: +962 6 429 1511 ext. 425/362.			

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	Differentiate between the different types of pharmaceutical dosage forms (solid, semi-solid, and liquid).	**MK2**
K2	Outline the packaging, labeling, and storage requirements of extemporaneously compounded pharmaceutical dosage forms.	**MK2**
K3	Identify the uses of compounded preparations and each of their ingredients.	**MK3**
Skills **The student should be able to:**		
S1	Perform the calculations needed to prepare different types of pharmaceutical dosage forms.	**MS4**
S2	Apply the appropriate compounding procedures to prepare liquid (suspensions and emulsions), semi-solid (creams, ointments, gels, and pastes), and solid (suppositories) dosage forms.	**MS4**
S3	Write an accurate label for compounded preparations including the use of the preparation, dosing frequency, special instructions and precautions, and proper storage conditions.	**MS4**
Competencies **The student should be able to:**		
C1	Educate patients about the correct use and storage of extemporaneously compounded preparations.	**MC2**
C2	Collaborate effectively with team members when performing the experiments and submitting the lab reports.	**MC3**

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 **
1	Check-in: Laboratory instructions and introduction to extemporaneous compounding	Lecture	Lab Manual
2	Suspensions	Lecture, practical learning	Lab Manual, video on E-Learning platform
3	Emulsions part 1	Lecture, practical learning	Lab Manual, video on E-Learning platform
4	Emulsions part 2	Lecture, practical learning	Lab Manual, video on E-Learning platform
5	Ointments	Lecture, practical learning	Lab Manual, video on E-Learning platform
6	Creams part 1	Lecture, practical learning	Lab Manual, video on E-Learning platform
7	Creams part 2	Lecture, practical learning	Lab Manual, video on E-Learning platform
8	Pastes	Lecture, practical learning	Lab Manual, video on E-Learning platform
9	Gels	Lecture, practical learning	Lab Manual, video on E-Learning platform
10	Suppositories part 1	Lecture, practical learning	Lab Manual, video on E-Learning platform
11	Suppositories part 2	Lecture, practical learning	Lab Manual, video on E-Learning platform
12	Cosmetic preparations	Lecture, practical learning	Lab Manual, video on E-Learning platform
13	**Final exam (practical)**	-	-
14	Check-out		
15			
16	**Final Exam (theoretical)**		

** 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

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