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.	**0201339**		**Course Name**		**Drug Information and Health Informatics**	
Credit Hours	**1**		**Prerequisite *Co-requisite**		**Pathophysiology + *Pharmacology (1)**	
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 course is designed to introduce students to the basic principles of drug information and their databases by using electronic and other technology-based systems including electronic health records, to capture, store, retrieve, and analyze data to use in patient care as medications and medical history of patients. In addition, the student will be able to use knowledge-based information which forms the scientific basis of health care and includes reference information (about drugs, procedures, disease states, etc.).

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	Pharmacy Informatics, Anderson, P.O., S.M. McGuinness and P.E. Bourne, 2009.			
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	Guide to Health Informatics, Coiera, E., 2015.			
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 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	Understand the concept of pharmacy informatics on practice	**MK3**
K2	Understand technologies used in pharmacy informatics	**MK3**
K3	Evaluate the effectiveness of informatics technology in selected settings	**MK3**
Skills **The student should be able to:**		
S1	Recognize the impact of ethical standards in the utilization of technology and informatics in healthcare	**MS2**
S2	Plan care and document health outcomes using informatics	**MS1**
Competencies **The student should be able to:**		
C1	Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use system.	**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 ** (Pages in Course Book)
1	What Is Pharmacy Informatics	Lecture	
2	Computer and Informatics Basics	Lecture	
3	Information Systems: Hospital Information Systems	Lecture	
4	Information Systems: Pharmacy Information Systems	Lecture	
5	Information Systems: Bedside Bar Coding Technology and Implementation	Lecture	
6	Avoiding Medication Errors	Lecture	
7	Tertiary Information Sources for Professionals and Patients	Lecture	
8	Clinical Decision Support Systems	Lecture	
9	**Midterm Exam**		
10	Hakeem (Guest Speaker)	Lecture	
11	Telehealth	Lecture	
12	Ethics and health informatics	Lecture	
13	Standardization & Accreditation in Health Care Informatics	Lecture	
14	Data Mining for Pharmacy Outcomes	Lecture	
15			
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
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