

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.	0201442	Course Name	Phytotherapy
Credit Hours	2	Prerequisite *Co-requisite	Chemistry of Natural Products
Course Type	☐ Mandatory University Requirement	☐ University Elective Requirement	☐ Faculty Mandatory Requirement
Teaching Style	☐ Full Online Learning	☒ Blended Learning	☐ Traditional Learning
Teaching Model	☐ 2 Synchronous: 1 Asynchronous	☒ 1 Face to Face: 1 Asynchronous	☐ 3 Traditional

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

Faculty Member and Study Division Information (to be filled in each semester by the subject instructor)					
Name	Academic rank	Office No.	Phone No.	E-mail	
Dr. Nour Aboalhaja	Assistant Prof.	272	-	n.aboalhaja@zu.edu.jo	
Office Hours (Days/Time)	Sunday (9-10), Monday (10-11), Wednesday (9-10), Tuesday (10-11), and Thursday (10-12)				
Division number	Time	Place	Number of Students	Teaching Style	Approved Model
				Blended Learning	1 Face to Face: 1 Asynchronous

Brief Description

This course is complimentary to the pharmacology and chemistry of natural products courses. It gives basic information about herbal medicine and natural products, including indications, dosing, side effects, contraindications, herb-herb, and herb-drug interactions. Information resources, quality control, and standardization of herbal products are also included.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	1. Fundamentals of pharmacognosy and phytotherapy, 3 rd edition. Michael Heinrich, Joanne Barnes, Simon Gibbons Elizabeth M. Williamson. Elsevier, 2018.
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	2. Phytotherapy for pharmacy students, a textbook for pharmacy students, Dr. Dezső Csupor, University of Szeged, 2015. 3. Mosby's Handbook of Herbs & Natural Supplements. 4th Edition by Linda Skidmore-Roth. RN, MSN, NP, 2010. 4. Herbal Medicines, Joanne Barnes, Linda A. Anderson and J. David Phillipson, Third Edition, ISBN 978 0 85369 623 0, 2008, RPS Publishing, UK. 5. Pharmacotherapy Casebook: A Patient-Focused Approach, 10th edition Terry L. Schwinghammer, Julia M. Koehler, Jill S. Borchert, Douglas Slain, Sharon K. Park. 6. National Center for Complementary and Integrative Health, National Institutes of Health (NIH). Available online at https://nccih.nih.gov 7. Natural Medicines Comprehensive Database: http://www.naturaldatabase.com 8. Medline Plus, the U.S. National Library of Medicine, National Institute of Health: http://www.nlm.nih.gov/medlineplus/druginfo/herb_All.html

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	9. American Botanical Council: http://abc.herbalgram.org 10. FDA Medwatch, The FDA Safety Information and Adverse Event Reporting Program: www.fda.gov/medwatch 11. The WHO monographs on selected medicinal plants: http://apps.who.int/medicinedocs/en/d/Js2200e/
Supporting Websites	
The Physical Environment for Teaching	☒ Classroom ☐ Labs ☒ Virtual Educational Platform ☐ Others
Necessary Equipment and Software	- Microsoft Office - Moodle
Supporting People with Special Needs	
For Technical Support	E-Learning & Open Educational Resources Center. Email: ellearning@zu.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		
K1	Recognize the different types of complementary and alternative medicine, including phytotherapy.	MK3
K2	Describe the regulations governing herbal medicines in Jordan and worldwide.	MK3
K3	Provide original examples of drugs from natural sources available in the local market for treatment of different disorders.	MK3
Skills		
S1	Categorize natural products based on their therapeutic outcome.	MS2
S2	Illustrate the indications, dosage, side effects, contraindications, precautions, common herb-drug interactions, and considerations for use of herbal medicines particularly during pregnancy and lactation.	MS2
Competencies		
C1	Demonstrate professional responsibility by regularly attending lectures, submitting tasks on time, and staying up to date with the latest information on natural drugs.	MC3
C2	Collaborate effectively with team members to achieve shared goals.	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	30%	60%
Asynchronous Interactive Activities	30%	30%	0	0

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Final Exam	40%	40%	40%	40%
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Note: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, 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.

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

Week	Subject	Learning Style*	Reference **
1-3	Introduction to Phytotherapy - Fundamentals of phytotherapy - Quality control and standardization of herbal medicines - Evidence Based Medicine - Herbal formulations - Herb-drug interactions	Lecture	Chapter 10 (162-172) Chapter 11 (173-178)
4-5	Herbal therapy for the Cardiovascular System Disorders. - Heart Failure: Foxglove and Hawthorn. - Hypertension: Hawthorn, Garlic, Valerian and Rauwolfia. - Chronic Venous Insufficiency: Horse chestnut and Butcher's broom.	Lecture	Chapter 21 (250-258)
6-7	Herbal therapy for Central Nervous System Disorders. - Anxiety, sleeping disorders: Valerian, Hop and Lavender, Lemon-balm, Passionflower, Oat and Motherwort. - Depression: St. John's wort. - Migraine: Feverfew and Aroma therapy.	Lecture	Chapter 23 (273-285)
8-9	Herbal therapy for Genitourinary System Disorders. - Infections of the urinary tract: Bearberry, Juniper, Goldenrod, Parsley and Java tea. - Benign prostatic hyperplasia: Saw palmetto, Pumpkin and Nettle.	Lecture	Chapter 24 (286-294) Chapter 25 (301-305)
10-12	Herbal therapy for Gastrointestinal System Disorders. - Carminatives: Caraway, Fennel and Peppermint. - Loss of appetite: Wormwood, Centaury and Fenugreek. - Bulk-forming laxatives: Linseed - Stimulant laxatives: Senna, Aloe, Cascara, Frangula and Rhubarb.	Lecture	Chapter 20 (235-249)
13-14	Herbal therapy for Respiratory System Disorders. - Dry cough: Marshmallow and Iceland moss. - Productive cough: Ivy and Thyme, Eucalyptus and Licorice/liquorice.	Lecture	Chapter 22 (259-272)
15	Herbal Therapy for Dermatological Disorders: Aloe Vera, Evening Primrose oil, and Witch Hazel.	Lecture	Chapter 28 (318-325)
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.

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

Week	Task / Activity	Reference	Expected Results
1-3	Assignment about herbal regulations in Jordan	JFDA website	Answer the assignment questions by reference to an official website.
4-5	Group presentation about drugs from natural sources available in the local market for treatment of cardiovascular system disorders	Different Resources	Prepare a scientific presentation by collaborating with group members.
6-7	Group presentation about drugs from natural sources available in the local market for treatment of central nervous system disorders.	Different Resources	Prepare a scientific presentation by collaborating with group members.
8-9	Group presentation about drugs from natural sources available in the local market for treatment of genitourinary system disorders.	Different Resources	Prepare a scientific presentation by collaborating with group members.
10-12	Group presentation about drugs from natural sources available in the local market for treatment of gastrointestinal system disorders.	Different Resources	Prepare a scientific presentation by collaborating with group members.
13-14	Group presentation about drugs from natural sources available in the local market for treatment of respiratory system disorders.	Different Resources	Prepare a scientific presentation by collaborating with group members.