

Philadelphia University	 PHILADELPHIA UNIVERSITY <small>THE WAY TO THE FUTURE</small>	Approved Date: 24-02-2024
Faculty: Pharmacy		Issue: 1
Department: Pharmacy		Credit Hours: 2
Academic Year: 2023/2024		Bachelor: 2nd year

Course Information

Course No.	Course Title	Prerequisite	
0521511	Phytotherapy	0521223	
Course Type		Class Time	Room No.
<input type="checkbox"/> University Requirement		Sat, Mon 09:45-10:45 (Section 2)	609
<input type="checkbox"/> Faculty Requirement		Sun, Tue 12:40-13:40 (Section 1)	611
<input type="checkbox"/> Major Requirement			
<input type="checkbox"/> Elective			
<input checked="" type="checkbox"/> Compulsory			

Course Level*				Hours			Equivalent hours*
4 th <input type="checkbox"/>	5 th <input type="checkbox"/>	6 th <input type="checkbox"/>	7 th <input checked="" type="checkbox"/>	Contact 30	Independent Learning 26	Assessment 3	6
				Total: 59			

Instructor's Information

Name	Office No.	Phone No.	Office Hours	E-mail
Dr. Balakumar Chandrasekaran	520	+9622637444 Ext.: 2274	Saturday-Tuesday: 15:00-16:00	balakumar@philadelphia.edu.jo

Course Delivery Method

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Blended	Online	Physical
Learning Model		
Percentage	Synchronous	Asynchronous
	0%	0%
		100%

Course Description

This course builds upon and consolidates the knowledge gained from the courses in pharmacology, phytochemistry, and pharmacognosy. It gives a basic idea about treatment using medicinal plants and natural products from other natural sources; such as animals, algae, and fungi. It includes the definition of phytotherapy, terminology, historical background, available dosage forms in the market, toxicity, precaution, regulation, and legislation. The effects of common food ingredients and standardized plant extracts directly pertinent to the pharmacological effects or overall safety of plant-based medicines are also discussed. Scientific evidence ascertaining clinical applications of herbs and natural products in medicine, from case histories to full clinical trials is also emphasized including herb-herb interaction and herb-drug interaction, and other aspects of the safety of herbal medicines.

Course Learning Outcomes

Number	Outcome	Corresponding Program Outcomes
Knowledge		
K1	Describe the chemistry of the active ingredients found in medicinal plants and the basic methods used in their extraction.	Kp1
K2	Explain the efficacy of medicinal plants/extracts in a certain disease state, along with their mechanism of action.	Kp1
K3	Gain knowledge about herb-drug interactions and herb-herb interactions.	Kp1
Skills		
S2	Able to identify different relationships between Phytotherapy and conventional medicines and educate patients about possible herb-drug interactions.	Sp1
Competencies		
C1	Able to identify the appropriate medicinal herb according to specific patient groups and educate them about it.	Cp1

Learning Resources

Course Textbook	<ol style="list-style-type: none"> Fundamentals of Pharmacognosy and Phytotherapy; by Michael Heinrich, Joanne Barnes, Simon Gibbons and Elizabeth M Williamson (2012), Elsevier Ltd ISBN: 978-0-7020-3388-9. Pharmacognosy; Trease and Evans. 16th Edition, 2009, Published by ELBS, London ISBN 978-0702029332
Supporting References	<ol style="list-style-type: none"> Principles and Practice of Phytotherapy: Modern Herbal Medicine (second edition): by Kerry Bone, and Simons Mills. Elsevier: 978-0-443-06992-5 Herbal therapy for human diseases: Irfan Ali Khan and Atiya Khanum (2007), Ukaaz publications ISBN: 81-88279-43-9. Herbal medicinals: a clinician's guide
Supporting Websites	<i>Natural Medicines Comprehensive Database</i> www.naturaldatabase.com www.pubmed.com www.fda.gov (Food & Drug Administration) www.uspharmacist.com (a pharmacy monthly publication that includes articles on herbals); www.altmed.od.nih.gov (National Centre for Complementary & Alternative Medicine);

	www.fda.gov/medwatch (Report an adverse effect due to an herb/herbal product); www.nccam.nih.gov (National Centre for Comp.)
Teaching Environment	<input checked="" type="checkbox"/> Classroom <input type="checkbox"/> laboratory <input type="checkbox"/> Learning Platform <input type="checkbox"/> Other

Meetings and Subjects TimeTable

Week	Topic	Learning Method*	Task	Learning Material
1	Vision and Mission of Faculty of Pharmacy Course Syllabus General introduction for Glycosides	Lecture		Vision and Mission of Faculty of Pharmacy, Course Syllabus, Txt. B.1, Chapter 6 Txt. B.2 Chapter 20
2	Saponin glycosides: Introduction, Dioscorea, Ginseng, Glycyrrhiza, quillaia, ivy, horse chestnut,	Lecture Collaborative learning	Case study	Txt. B.1, Chapter 6, 11, 14, 15, 16, 25 Txt. B.2 Chapter 23
3	Flavonoid glycosides	Lecture		Txt. B.1, Chapter 6, 19, Txt. B.2 Chapter 21
4	Flavonoid glycosides	Lecture Problem-solving based learning	Homework	Txt. B.1, Chapter 6, 19, Txt. B.2 Chapter 21
5	Anthocyanidins: pelargonidin, cyanidin, delphinidin, malvidin, etc.	Lecture		Txt. B.1, Chapters 6, 15, Txt. B.2 Chapter 21
6	Cyanogenic / Cyanophore glycosides: amygdalin, prunasin Isothiocyanate glycosides: sinigrin, sinalbin	Lecture		Txt. B.1, Chapter 6 Txt. B.2 Chapter 25
7	Bitter principles: Coumarins and Furanocoumarins: scopoletin, psoralen, khellin, bergapten, aesculetin, xanthotoxin Terpenes	Lecture		Txt. B.1, Chapters 6, 10, 16 Txt. B.2 Chapter 21
8	Tannins Resin and lignans	Lecture Problem-solving based learning	Short report Homework	Txt. B.1, Chapters 6, 10, 16 Txt. B.2 Chapter 21 Txt. B.1, Chapters 6, 11, 18
9	Phytotherapy for the CNS	Lecture		Txt. B.1, Chapter 17
10	Phytotherapy for the respiratory system	Lecture	Short presentation	Txt. B.1, Chapter 16
11	Phytotherapy for the endocrine system Phytotherapy for the skin	Lecture	Short presentation	Txt. B.1, Chapter 19 Chapter 22
12	Phytotherapy is anti-infectious.	Lecture	Short presentation	Txt. B.1, Chapter 18

	Phytotherapy for the eye, nose, and ear			Chapters 23 and 24
13	Phytotherapy for the musculoskeletal system	Lecture	Short presentation	Txt. B.1, Chapter 21
14	Phytotherapy for the cardiovascular	Lecture	Short presentation	Txt. B.1, Chapter 15

Course Contributing to Learner Skill Development

Using Technology
<ul style="list-style-type: none"> Demonstrate ability to search and use the literature in both printed and electronic formats Using PowerPoint or any other relevant programs for preparing presentations.
Communication Skills
<ul style="list-style-type: none"> Demonstrate effective written and oral communication skills, especially the ability to transmit complex technical information clearly and concisely.
Application of Concept Learnt
<ul style="list-style-type: none"> To have the ability to communicate with the patients regarding the proper use of herbal products.

Assessment Methods and Grade Distribution

Assessment Methods	Grade	Assessment Time (Week No.)	Course Outcomes to be Assessed
Mid Term Exam	% 30	11 th week	K1, K2
Term Works*	% 30	Continuous	K1, K2, K3, S1, C1
Final Exam	% 40	16 th week	K1, K2, K3, S1, C1
Total	%100		

* Include quizzes, in-class and out of the class assignment, presentations, reports, videotaped assignment, group, or individual project.

Alignment of Course Outcomes with Learning and Assessment Methods

Number	Learning Outcomes	Learning Method*	Assessment Method**
K1	Describe the chemistry of the active ingredients found in medicinal plants and the basic methods used in their extraction.	Lecture Collaborative learning Problem-solving based learning	Subjective Quiz Exam/Objective questions Homework evaluation
K2	Explain the efficacy of medicinal plants/extracts in certain disease states, along with their mechanism of action.	Lecture Problem-solving based learning	Subjective Quiz Exam/Objective questions Short presentation evaluation

K3	Gain knowledge about herb-drug interactions and herb-herb interactions.	Lecture Problem-solving based learning	Subjective Quiz Exam/Objective questions Short presentation evaluation
S1	Able to identify the appropriate medicinal herb according to specific patient groups and educate them about it.	Lecture Problem-solving based learning	Exam/Objective questions Short presentation evaluation
C1	Able to identify different relationships between Phytotherapy and conventional medicines and educate them about possible herb-drug interactions.	Lecture Problem-solving based learning	Exam/Objective questions Short presentation evaluation

*Include lecture, flipped class, project-based learning, problem-solving-based learning, and collaborative learning.

** Include quizzes, in-class and out-of-class assignments, presentations, reports, videotaped assignments, and group or individual projects.

Course Policies

Policy	Policy Requirements
Passing Grade	The minimum pass for the course is (50%) and the minimum final mark is (35%).
Missing Exams	<ul style="list-style-type: none"> • Anyone absent from a declared semester exam without a sick or compulsive excuse accepted by the dean of the college that proposes the course, a zero mark shall be placed on that exam and calculated in his final mark. • Anyone absent from a declared semester exam with a sick or compulsive excuse accepted by the dean of the college that proposes the course must submit proof of his excuse within a week from the date of the excuse's disappearance, and in this case, the subject teacher must hold a compensation exam for the student. • Anyone absent from a final exam with a sick excuse or a compulsive excuse accepted by the dean of the college that proposes the material must submit proof of his excuse within three days from the date of holding that exam.
Attendance	The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to six lecture days (n t) and seven lectures (days). If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory or compulsive excuse accepted by the dean of the faculty, he is prohibited from taking the final exam and his result in that subject is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college that The article is introduced, it is considered withdrawn from that article, and the provisions of withdrawal shall apply to it.
Academic Integrity	Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as cheating, plagiarism (academic theft), collusion, and intellectual property rights.

Program Learning Outcomes to be Assessed in this Course

Number	Learning Outcome	Course Title	Assessment Method	Targeted Performance Level
Sp3	Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding	Phytotherapy	Oral presentation	75 % of the students should have a minimum score of 7 out of 10

Description of Program Learning Outcomes Assessment Method

Number	Detailed Description of Assessment
Sp4	Students should prepare reports related to the gist of the outcome, and display them before their colleagues in the classroom. They have total freedom to run the time allocated for each of them and stimulate the reactions of their colleague. They have to try their best to present ideal presentations whose parts will be evaluated according to the rubric shown below.

Assessment Rubric of the Program Learning Outcomes

Non-verbal skills	4	3	2	1
Eye contact	Holds attention to the entire with the use of direct eye contact, seldom looks at slides or notes.	Consistent use of direct eyes contact but still returns to notes.	Display minimal eye contact with the audience, while reading mostly from notes.	No eye contact with audience, as entire report is read from a note.
Body language	Movements seem fluid and help the audience visualize.	Made movements or gestures that enhance articulation.	Very few movements or descriptive gestures.	No movement or gestures.
Poise	Displays a relaxed, self-confident nature about self, with no mistakes.	Makes minor mistakes, but quickly recovers from them; displays little or no tension.	Displays mild tension; has trouble recovering from mistakes.	Tension and nervousness are obvious; has trouble recovering from mistakes.

Non-verbal skills	4	3	2	1
Enthusiasm	Demonstrates a strong, positive feeling about the topic during the entire	Occasionally shows positive feelings about the topic.	Shows some negativity toward the topic presented.	Shows absolutely no interest in the topic presented.

	presentation.			
Speaking skills	Uses a clear voice and speaks at a good pace so audience members can hear the presentation. Does not read off slides.	The presenter's voice is clear. The pace is a little slow or fast at times. Most audience members can hear the presentation.	The presenter's voice is low. The pace is much too rapid/slow. Audience members have difficulty hearing and understanding.	The presenter mumbles, talks very fast, and speaks too quietly for the majority of students and understand.

Timing	4	3	2	1
Length of presentation	Within two minutes of the allotted time -/+	Within four minutes of the allotted time -/+	Within six minutes of the allotted time -/+	Too short or too long; within ten minutes of allotted time -/+

Content	4	3	2	1
Subject knowledge	An abundance of material related to the research is presented. Points are clearly made and evidence is used to support claims	Sufficient information with many good points made, uneven balance, and little consistency	There is a great deal of information that is not clearly integrated or connected to the research	The goal of the research is unclear, information included that does not support research claims in any way
Organization	Information is presented in a logical and interesting sequence that which audience can follow. Flows well	Information is presented in a logical sequence that which audience can follow.	The audience has difficulty following the presentation because the presentation jumps around and lacks clear transitions	The audience cannot understand the presentation because there is no sequence of information
Visuals	Excellent visuals that are tied into the overall story of the research	Appropriate visuals are used and explained by the speaker	Visuals are used but not explained or put in context	Little or no visuals, too much text on slides
Mechanics	The presentation has no misspellings or grammatical errors	The presentation had no more than two misspellings and/or grammatical errors	The presentation has three misspellings and/or grammatical errors	The presentation had many spelling and/or grammatical errors