Philadelphia University	PHILADELPHIA UNIVERSITY THE WAY TO THE FUTURE	**Approved Date:** 10\10\2021
Faculty: Pharmacy		**Issue:** 1
Department: Pharmaceutical Science		**Credit Hours:** 1 hr
Academic Year: 2021\2022	**Course Syllabus**	**Bachler:**

Course Information

Course No.	Course Title	Prerequisite
0510222	Pharmacognosy and phytochemistry Practical	0510210

Course Type	Class Time	Room No.
☐ Univirsity Requirement ☐ Fuclty Requirement ■ Major Requirement ☐ Elective ■ Compulsory	Sunday: 8:00-9:45 2:15-4:00 Monday: 8:00-9:45 2:15-4:00 Tuseday: 2:15-4:00 Wednesday: 8:00-9:45 2:15-4:00	406

Instructure Information

Name	Office No.	Phone No.	Office Hours	E-mail
Coordintor: Dr.Manal alhusban **Lecturer:** Eman alshahrori	616	Ext. 2359	Sunday-Thursday (12-1)	malhusban@philadelphia.edu.jo eshahrorri@philadelphia.edu.jo

Course Delivery Method

☐ Blended	☐ Online	■ Physical
Learning Model		

Percentage	Synchronous	Asynchronous	Physical
			100%

Course Description

The course is designed to provide the student with basic information about practical pharmacognosy and phytochemi microscopical examination for the different plant parts, extraction and identification for; anthraquinone, saponin, anthocyanins and cardiac glycosides from pharmaceutical product, detection for alkaloid. Application of thin layer chromatography for volatile oil or Rutin and detection of the isolated spots by appropriate spraying reagent.

Course Learning Outcomes

Number	Outcome	Corresponding Program Outcomes	Corresponding Competencies
Knowledge			
K1	To learn the student basic information about Practical pharmacognosy and phytochemistry, including quality control using microscopy.	K_p1	C1
K2	To identify different medicinal plants part including: root, leaves, barks, fruit and seeds in comparison with monographic data provided by pharmacopeias.	K_p1	C1
K3	The students well practice different extraction method according to the chemical nature of phytochemical groups existed in medicinal plant or pharmaceutical product.	K_p1	C1
K4	Identification of the extract is also done by chemical method provided by pharmacopeia or literature data.	K_p1	C1
Skills			
S1	To acquire basic skills in using the microscope to identify plant powder using different mounting agent	S_p2,S_p3, S_p6	C8,C9,C12
S2	Practice the knowledge gained in organic chemistry in the extraction of different phytochemical plant material according to solubility in suitable solvent relying on the fact that like dissolve like.	S_p2,S_p3, S_p6	C8,C9,C12
S3	Detection of the extracted phytochemical groups by different chemical methods and TLC profiles supported by pharmacopeia.	S_p2,S_p3, S_p6	C8,C9,C12

Learning Resources

Course Textbook	Trease and Evans' Pharmacognosy By W C Evans, 16th Edition (2009). Saunders; ISBN: 0702026182
Supporting References	- By Jean Bruneton (1995), English edition. Levoisier Publishing, Paris;

	ISBN: 1898298130 The above textbooks cover the course material in detail. However, additional practical tips, examples and conclusions are discussed in details by the lecturer and the student will be responsible for the additional material
Supporting Websites	
Teaching Environment	☐ **Classroom** ■ **laboratory** ■ **Learning Platform** ☐ **Other**

Meetings and Subjects Time Table

Week	Topic	Learning Method*	Task	Learning Material
1	a. Vision and Mission of Faculty of pharmacy. b. Course syllabus. c. Safety rules	Lecture		Vision and Mission of Faculty of pharmacy Course syllabus
2	Introduction to the microscopy + General mounting reagents	Flipped learning Practical	Report Quizes	Lab manual
3	Microscopical identification for starch +Calcium oxalate	Flipped learning Practical	Report Quizes	Lab manual
4	Microscopical identification for Ginger root + cinnamon barks	Flipped learning Practical	Report Quizes	Lab manual
5	Microscopical identification for Senna leaves + chamomile flower	Flipped learning Practical	Report Quizes	Lab manual
6	First exam			
7	Identification for alkaloid by general test and specific test (first part).	Flipped learning Practical	Report Quizes	Lab manual
8	Identification for alkaloid by microcrystalline test (second part)	Flipped learning Practical	Report Quizes	Lab manual
9	Practical exam			
10	Extraction and identification for Anthraquinone glycosides	Flipped learning Practical	Report Quizes	Lab manual
11	Second exam			

12	Methods of extraction	Flipped learning Practical	Report Quizes	Lab manual
13	Microscopical identification for Anise fruit +linseed	Flipped learning Practical	Report Quizes	Lab manual
14	Final exam			

*Includes: lecture, flipped Class, project based learning, problem solving based learning, collaboration learning.

Course Contributing to Learner Skill Development

Using Technology
• Using poer point or any other relevant programs for preaparing presentations. • Using Microsoft word to Doing homework and simple reports
Communication Skills
Students will develop the ability for group discussions and critical thinking
Application of Concept Learnt
The familiarity to carry out the various experiments, especially those dealing with extraction and identification of certain natural products. The ability to solve problems depending on a good basic theoretical achievement.

Assessment Methods and Grade Distribution

Assessment Methods	Grade	Assessment Time (Week No.)	Course Outcomes to be Assessed
Reports and evaluation	**% 30**	**Continous**	**K1,S2,S3,S6**
Quizzes	**% 20**	**Continous**	**K1,S2,S3,S6**
Practical exam	**%10**	**9 th**	**K1,S2,S3,S6**
Final Exam	**% 40**	**14 th**	**K1,S2,S3,S6**
Total	**%100**		

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

Alignment of Course Outcomes with Learning and Assessment Methods

Number	Learning Outcomes	Corresponding Competencies	Learning Method*	Assessment Method**
Knowledge				
K1	To learn the student basic information about Practical pharmacognosy and phytochemistry, including quality control using microscopy.	C1	Flipped Learning	Report

			Practical	Quizes
K2	To identify different medicinal plants part including: root, leaves, barks, fruit and seeds in comparison with monographic data provided by pharmacopeias.	C1	Flipped Learning Practical	Report Quizes
K3	The students well practice different extraction method according to the chemical nature of phytochemical groups existed in medicinal plant or pharmaceutical product.	C1	Flipped Learning Practical	Report Quizes
K4	Identification of the extract is also done by chemical method provided by pharmacopeia or literature data.	C1	Flipped Learning Practical	Report Quizes
Skills				
S1	To acquire basic skills in using the microscope to identify plant powder using different mounting agent	C8,C9,C12	Flipped Learning Practical	Report Quizes
S2	To Detect of the extracted phytochemical groups by different chemical methods and TLC profiles supported by pharmacopeia.	C8,C9,C12	Flipped Learning Practical	Report Quizes
S3	Practice the knowledge gained in organic chemistry in the extraction of different phytochemical plant material according to solubility in suitable solvent relying on the fact that like dissolve like.	C8,C9,C12	Flipped Learning Practical	Report Quizes

*Include: lecture, flipped class, project based learning, problem solving based learning, collaboration learning.
** Include: quizzes, in-class and out of class assignments, presentations, reports, videotaped assignments, group or individual projects.

Course Polices

Policy	Policy Requirements
Passing Grade	The minimum pass for the course is (50%) and the minimum final mark is (35%).
Missing Exams	• 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, intellectual property rights.

Program Learning Outcomes to be Assessed in this Course

Number	Learning Outcome	Course Title	Assessment Method	Targeted Performance level

Description of Program learning Outcomes Assessment Method

Number	Detailed Description of Assessment

Assessment Rubric of the Program Learning Outcomes
