



**Jordan University of Science and Technology**  
**Faculty of Pharmacy**  
**Pharmacy Department**

PHAR336 Pharmacognosy And Phytochemistry Lab Oratory - JNQF Level: 7

First Semester 2023-2024

**Course Catalog**

1 Credit Hours. The course is designed to provide the student basic information about practical pharmacognosy and phytochemistry, including quality control using microscopy to identify different medicinal plants part including: roots, rhizomes, fruits and seeds in comparison with monographic data provided by pharmacopoeia. Also, this practical course provides students with the required practical skills of natural product analysis including herbal sample preparation (drying and grinding), extraction, separation (chromatography; TLC) and characterization. The applications covered include some selected medicinal herbs and their extractions that are rich in various phytochemical groups such as; alkaloids, flavonoids, tannins, saponins.. etc., particularly covered by theoretical courses.

**Text Book**

Title	Pharmacognosy by Trease and Evans
Author(s)	William Charles Evans
Edition	11th Edition
Short Name	1
Other Information	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
2	Powdered Vegetables Plant Drugs	Betty P. Jackson and Derek W. Snowdon	1st Edition	
3	Drugs of Natural Origin	Lars Bohlin, Gunnar Samuelsson	4th Edition	
4	British Pharmacopoeia	Anthony C. Cartwright	5th Edition	

**Instructor**

Name	<b>Mrs. Dua Alsinglawi</b>
Office Location	-
Office Hours	
Email	dsalsinglawi6@just.edu.jo

**Class Schedule & Room**

Section 1:  
 Lecture Time: Sun : 14:30 - 16:30  
 Room: LAB

**Tentative List of Topics Covered**

Weeks	Topic	References
Weeks 1, 2	Microscopically examination of selected plants	From 2
Week 3	Carbohydrates: General Tests and Specific Tests	From 1, From 4
Week 4	Honey and Polysaccharide	From 1, From 4

Week 5	Preparation of Plant Extract for Phytochemical Screening	From 1, From 2
Week 6	Screening for Alkaloids, Flavonoids and Tannins	From 1, From 2, From 4
Week 8	Clevenger Apparatus; Soxhlet Extractor; Rotary Evaporator	From 1, From 3
Week 9	Isolation of Caffeine form Tea Leaves	From 1, From 3, From 4
Week 10	Chromatographic Techniques: Thin Layer Chromatography TLC, Column Chromatography CC	From 1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Discuss the basis for the identification of plant drugs for the detection of adulterated and poor quality (quality control of plant drugs) using the microscope [1PLO1.1] [1L7S3]	20%	Mid-Term practical exam, Quizzes, In-Lab evaluation, Final exam
Provide the students with the appropriate knowledge and skills of the methods of extraction and separation of natural plant constituents [1PLO2.1] [1L7S2]	35%	Mid-Term practical exam, Quizzes, In-Lab evaluation, Final exam
Identify the groups of plant secondary constituents using different chemical methods and TLC profiles supported by pharmacopoeia [1PLO3.1] [1L7S1]	35%	Mid-Term practical exam, Quizzes, In-Lab evaluation, Final exam
Outline the importance and the efficacy of the most of the herbal medicines and natural products (formulated preparation in medicinal use) [1PLO2.2] [1L7K1]	10%	Mid-Term practical exam, Final exam

Relationship to Program Student Outcomes (Out of 100%)															
PLO1.1	PLO2.1	PLO3.2	PLO3.3	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1
20	35			10			35								

Relationship to NQF Outcomes (Out of 100%)			
L7K1	L7S1	L7S2	L7S3
10	35	35	20

Evaluation	
Assessment Tool	Weight
Mid-Term practical exam	35%
Quizzes	15%
In-Lab evaluation	10%
Final exam	40%

Policy	
Exams	All exams are closed book and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the dean
Cheating	Prohibited; The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied المادة 7: إذا ضبط الطالب أثناء الامتحان أو الاختبار متلبساً بالعث فتوقع عليه العقوبات التالية مجتمعة: أ- اعتباره راسياً في ذلك الامتحان أو الاختبار. ب- الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل. ج- فصله من الجامعة لمدة فصل دراسي واحد، و هو الفصل التالي للفصل الذي ضبط فيه.
Attendance	Excellent attendance is expected. JUST policy requires the faculty member to assign ZERO grade (35) if a student misses 10% of the classes that are not excused. If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Participation	Excellent participation is expected
Withdraw	Last day of courses withdrawal (without reimbursement of tuition fees) is 6/1/2022

Classroom Cell Phone Policy	? The use of cell phones, smart phones, or other mobile communication devices is disruptive, and is therefore prohibited during class without permission. ? Except in emergencies, those using such devices must leave the classroom for the remainder of the class period.
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