Course Description Form

1. Course Name:
Pharmacognosy III (Theoretical+ Practical)
2. Course Code:
Phcog24-3210--
3. Semester / Year:
2nd Semester/3rd year
4. Description Preparation Date:
19/01/2025
5. Available Attendance Forms:
Students' signature on attendance sheet
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours Theoretical + 2 hours Practical (75) /4 units
7. Course administrator's name
Theoretical
Name: Assist. Prof. Dr. Mohannad Emad Email: mohannad.qazzaz@uomosul.edu.iq Assist. Prof. Dr. Zainab Haitham Email: zainabh@uomosul.edu.iq Assist. Prof. Dr. Khadeja Younus Email: khadejaalabidalwaahed@uomosul.edu.iq
Practical
Lecturer: Dr. Ban Ali Email: ban-alnuaimy67@uomosul.edu.iq Assist. Lecturer: Zena Sideeq Email: zena.sideeq@uomosul.edu.iq Assist. Lecturer: Samara Sameer Email: samara.sameer@uomosul.edu.iq Assist. Lecturer: Sura Maan Salim Email: sura.maan@uomosul.edu.iq Pharmacist: Noor Saad Email: noormahmoodph88@gmail.com Pharmacist: Mayada Muhammed Email: Mayadamohammed@unmousl.edu.iq
8. Course Objectives

Course Objectives Obtaining the theoretical information about plant components (alkaloids), antibiotics and phytotherapy and how to extract them.	• The course includes the basics extracting active alkaloids compou from plants and knowing th importance to humans.

9. Teaching and Learning Strategies	
Strategy	Lecturing Seminars Homework Quiz Practical laboratory demonstrations and extraction techniques.

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	3+2	Alkaloids; Introduction; Ornithine-derived alkaloid Tropane alkaloids. Isolation of Peganum harmala alkaloids.	Alkaloids	Theoretical lectures Laboratory experiments	Paper-based exams
2	3+2	Pyrrolizidine alkaloids, Lysine-derived alkaloids. Preparation of Khellin.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
3	3+2	Phenylalanine-, tyrosine- a dihydroxyphenylalanine-derived alkaloids, Protoalkaloids. Flavonoids of Ruta graveolens.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
4		Benzylisoquinoline derivatives, Tetrahydroisoquinoline. Extraction of hesperidin.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
5	3+2	Monoterpenoid alkaloids a glycosides. Isolation of pectin.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
6	3+2	Amaryllidaceae alkaloids. Isolation of citric acid fror lemon juice.	Alkaloids	Theoretical lectures Laboratory experiments	Paper-based exams
7	3+2	Phenethylisoquinoline alkaloids. Isolation of citric acid fror lemon juice.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
8	**Mid-term exam**				
9	3+2	Tryptophan-derived alkaloids. Isolation of Podophyllotox from Podophyllum emodi.	Volatile oils	Theoretical lectures Laboratory demonstration	Paper-based exams
10	3+2	Miscellaneous alkaloids Indolizidine alkaloids Imidazole alkaloids.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams

		Isolation of Rotenone from Lonchocarpus Spp.			
11	3+2	Purine alkaloids Reduced pyridine alkaloid Isolation of Peganum harmala alkaloids.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
12	3+2	Terpenoid alkaloids Steroidal alkaloids. Preparation of Khellin.	Alkaloids	Theoretical lectures Laboratory demonstration	Paper-based exams
13	3+2	Antibiotics. Flavonoids of Ruta graveolens.	Antibiotics	Theoretical lectures Laboratory demonstration	Paper-based exams
14	3+2	Phytotherapy. Isolation of pectin.	Phytotherapy	Theoretical lectures Laboratory demonstration	Paper-based exams
15	**Students' seminars**				

11. Course Evaluation

- 20 M Theoretical assessment;
  (paper-based mid-term exam + quiz + attendance + seminar)
- 20 M practical assessment (attendance + quiz + practice)
- 60 M paper-based theoretical final exam

100 M total

12. Learning and Teaching Resources

Required textbooks	1. Robbers JE, Speedie MK, Tylor VE, Pharmacognosy and Pharmacobiotechnology; 2nd edition 2008.
Main references (sources)	1. Trease and Evans' Pharmacognosy 2. Practical Pharmacognosy techniques & experiment
Electronic References, Websites	• https://search.worldcat.org/en/title/6050819 • https://search.worldcat.org/en/title/10198843