



Course description form

1. : Course Name					
Medicinal and aromatic plants					
2. :Course Code					
MEAP315					
3. :Semester/Year					
semester , spring /2024-2025					
4. Date this description was prepared					
2025/2/1					
5. Available forms of attendance:					
My presence+ Electronic					
6. :Number of study hours (total)/number of units (total)					
/ theoretical hours + 3 practical hours 23.5 units					
7. Name of the course administrator (if more than one name is mentioned)					
Name: A. M. Dr.. Fanar Hashem Email fanar@uomosul.edu.iq					
Name: M. M. Flowers of Fouad Abdul Jabbar					
8. Course objectives					
<p>Theoretical</p> <p>Explaining the importance of medicinal plants and .1 methods of extracting active ingredients used in .pharmaceutical industries</p> <p>Entering the agricultural sector with distinguished .2 efficiency by participating in the cultivation of .economic medicinal plants</p> <p>Directing students towards the desire to obtain .3 better experiences when applying for postgraduate studies</p>			<p>Practical</p> <ul style="list-style-type: none"> Enabling the student to learn about the types of medicinal and aromatic substances, their uses, their therapeutic effect, their effective substances, and how to extract them practically 		
9. Teaching and learning strategies					
<p>Theoretical</p> <p>Interactive lecture -</p> <p>Brainstorming -</p> <p>Dialogue and discussion -</p> <p>Assigning reports and cultivation of some medicinal - plants</p> <p>Conducting monthly and daily examinations -</p> <p>Presentations of methods for extracting active - substances</p>			<p>Practical</p> <ul style="list-style-type: none"> Assigning the tasks of preparing reports, planting seeds of types of medicinal plants, and conducting experiments on extracting some volatile oils 		
10. Course structure					
the week	hours	Required learning outcomes	Name of the unit or topic	Learning method	Evaluation method




1	2Theoretical 3Practical	<p>Theoretical: A1 The student explains the concept of medicinal plants and their relationship with other sciences</p> <p>Practical: A1 The student acquires knowledge and concepts on how to identify medicinal and aromatic plants, and their importance.</p>	<p>Theoretical: The concept of medicinal and aromatic plants A historical overview of the use of medicinal and aromatic plants Learn about the concept of medicinal plants and aromatic plants Practical: Concept of medicinal and aromatic plants A historical overview of the uses of medicinal and aromatic plants The different classifications of medicinal and aromatic plants, and the components of the production of medicinal and aromatic plants</p>	<p>theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports</p>	<p>Short exams, assignments, discussions</p>
2	2Theoretical 3Practical	<p>Theoretical: b2 The student explains the most important uses of medicinal plants</p> <p>Practical: A2 The student acquires knowledge and concepts in knowing a historical overview of the use of medicinal plants in treating diseases.</p>	<p>Theoretical: Benefits of medicinal and aromatic plants Reasons for interest in and cultivation of medicinal and aromatic plants Different uses of medicinal and aromatic plants Practical: Natural metabolites in plants</p> <p>Use a presentation</p> <p>Identify some of the medicinal and aromatic plants found in the wooden canopy of the college's Horticulture Department</p>	<p>theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports</p>	<p>Short exams, assignments, discussions</p>



3	2Theoretical 3Practical	<p>Theoretical: A2 The student becomes familiar with the most important obstacles to expanding the cultivation of medicinal plants</p> <p>Practical: C2 The student acquires knowledge and concepts in knowing the benefits and economic importance of medicinal plants in increasing national income.</p>	<p>Theoretical: Advantages and disadvantages of collecting medicinal and aromatic plants wild Advantages of growing medicinal and aromatic plants Obstacles to expanding the cultivation and production of medicinal and aromatic plants, and a discussion and short exam among students Practical: Methods of producing medicinal and aromatic plants The most important recommendations for promoting the production and export of medicinal .and aromatic plants Discussing student reports</p>	<p>theoretical ,audio metho Writing on the board Direct dialogu style practical Assigning tas and reports</p>	<p>Short exams, assignments, discussions</p>
4	2Theoretical 3Practical	<p>Theoretical: B5 The student judges the most important factors affecting the cultivation of medicinal plants</p> <p>Practical: b2 The student acquires knowledge and concepts in knowing the uses of medicinal plants.</p>	<p>Theoretical: natural factors The harmful effects of wind, air humidity and heat on plants Effect of rain and height above sea level Practical: collection and harvesting conditions Determine production during the seasons and seasons of the year A quick daily quiz on the previous lecture, viewing some examples of medicinal and aromatic flowers and seeds</p>	<p>theoretical ,audio metho Writing on the board Direct dialogu style practical Assigning tas and reports</p>	<p>Short exams, assignments, discussions</p>



			Field work in the field and direct identification of the plants available in the woody canopy, with discussions and answering students' questions		
5	2Theoretical 3Practical	Theoretical: C4 The student suggests names for plants that are grown when the acidity of the soil or neighboring soils is high Practical: A5 The student acquires knowledge and concepts in knowing the methods of steam distillation and extracting volatile oils.	Theoretical: Climatic factors Geological factors Aeration, salts in the soil and its acidity Practical: sage plant, rosemary plant, basil Celery, chrysanthemum, aloe vera , coriander Identify the plants present in the vegetable field and the woody canopy	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions
6	2Theoretical 3Practical	Theoretical: A2 The student learns about the most important plants that contain a high percentage of volatile oils Practical: A3 The student acquires knowledge and concepts in knowing the obstacles to growing medicinal plants and how to treat them	Theoretical: First semester exam Introduction to methods of cultivation and propagation in beds, lines, and the distance between plants Methods and times of harvesting the crop Practical: first exam Fenugreek, castor, sukran, licorice Discussing student reports	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions
7	2Theoretical 3Practical	Theoretical: A3 The student lists medicinal plants according to the parts used for food and spices Practical: b3 The student acquires knowledge and concepts in knowing the importance of the	Theoretical: Division of medicinal and aromatic plants according to life cycle Division of medicinal and aromatic plants according to the part used	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions


		advantages of growing medicinal plants.	Classification of medicinal and aromatic plants according to their content of secondary metabolites practical: Packing Storage Factors affecting the storage of medicinal and aromatic plants		
8	2Theoretical 3Practical	Theoretical: c4 The student identifies the most important methods for propagating medicinal plants Practical: b1 The student acquires knowledge and concepts in knowing the most important natural factors that affect the cultivation of medicinal plants.	Theoretical: Sexual reproduction, its advantages and disadvantages, and how to qualitatively control genetic traits in seeds Factors affecting seed viability in storage Types of rest and rest phase breaking coefficients Practical: Fundamentals of collecting and preparing medicinal and aromatic plants The stages that a medicinal plant goes through from collection to marketing Discussing student reports on the topic of collecting and marketing, field practices for students	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions 
9	2Theoretical 3Practical	Theoretical: A2 The student will be familiar with the method of propagating some difficult and economical medicinal plants Practical: C4 The student acquires knowledge and concepts in knowing the effect of geological factors on	Theoretical: Growing seeds in a sustainable field Vegetative propagation, its methods, and micropropagation Tissue culture Conduct a field visit to horticultural facilities to grow seeds of medicinal plants	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions

		the cultivation of medicinal plants.	Practical: View and learn about medicinal and aromatic plants Documenting with a report the medicinal and aromatic plants that were observed Taking some models of the plants that were observed to apply the drying and storage process by the students as homework		
10	2Theoretical 3Practical	Theoretical: A4 The student summarizes how to dry and preserve specimens of medicinal plants of different types Practical: a4 The student acquires knowledge and concepts on how to cultivate and propagate medicinal plants.	Theoretical: Types of drying methods Screening, packaging, storage and preservation A PowerPoint presentation explaining how the drying process and other processes are performed A field visit to private nurseries to learn about the most important medicinal and aromatic plants Practical: An overview of the extraction process of medicinal and aromatic plants Extraction in medicinal and aromatic plants Extraction methods	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions
11	2Theoretical 3Practical	Theoretical: d3 The student learns about the nature of volatile oils and their uses Practical: C5 The student acquires knowledge and concepts in knowing the importance of methods and when to collect different types of medicinal plants	Theoretical: The importance of volatile oils, their properties, and their presence in plants Physiological functions of volatile oils and their uses with a PowerPoint presentation How to extract and diagnose volatile oils, discuss with	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions



			<p>students, and take a short exam</p> <p>Practical: The steps that must be taken during the process of extracting active substances from medicinal plants</p> <p>How to get a concentrated extract</p> <p>Field practices for the students in the wooden canopy, with the students being given an assignment to extract rosemary oil and bring the .concentrated extract</p>		
12	2Theoretical 3Practical	<p>Theoretical: C5 The student judges the extent of benefit from the method of extracting some fixed oils to benefit from them at home</p> <p>Practical: d3 The student acquires knowledge and concepts on how to divide medicinal plants according to the part used to obtain the active substance.</p>	<p>Theoretical: Introduction to plants containing fatty acids, their importance and .types</p> <p>Identifying plants that contain fatty acids and methods for detecting them</p> <p>Extracting fatty acids, conducting a discussion among the students, and conducting a short exam</p> <p>Introduction to alkaloids, their importance, characteristics and benefits</p> <p>Practical: jasmine plant, fragrant plant, mint, cumin, hibiscus , chamomile, nigella ,sativa</p>	<p>theoretical ,audio method , Writing on the board</p> <p>Direct dialogue style</p> <p>practical</p> <p>Assigning tasks and reports</p>	<p>Short exams, assignments, discussions</p>
13	2Theoretical 3Practical	<p>Theoretical: C3 The student leads discussion groups on how to separate alkaloids chromatographically</p> <p>Practical: d5 The student acquires</p>	<p>Theoretical: partitioning of alkaloids</p> <p>Method of extracting alkaloids</p> <p>Practical: Chemical composition of volatile oil</p>	<p>theoretical ,audio method , Writing on the board</p> <p>Direct dialogue style</p> <p>practical</p>	<p>Short exams, assignments, discussions</p>



		knowledge and concepts on how to classify medicinal plants according to their content of secondary compounds.	terpene compounds in essential oils Terpene classification of essential oils	Assigning tasks and reports	
14	2Theoretical 3Practical	Theoretical: C2 The student prepares his point of view on how to benefit from the medical extraction of clasicosides Practical: d4 The student should be able to know the most important methods of drying medicinal plants in the correct way.	Theoretical: Second semester exam Glucosides, their general characteristics, and their medicinal and botanical benefits Methods of separating chalcosides Practical: Second semester exam Disclaimer of the union Isoprene , discussing student reports on volatile oil	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions 
15	2Theoretical 3Practical	Theoretical: e1 The student contributes with his colleagues to identifying the names of some medicinal plants during the visit Practical: e1 The student should be able to know the most important methods of screening, packing and storing in warehouses that meet sanitary conditions.	Theoretical: Conduct a field visit to horticultural facilities to grow some medicinal plants Practical: Make a field visit to the college laboratories to see and learn about some extraction devices	theoretical ,audio method Writing on the board Direct dialogue style practical Assigning tasks and reports	Short exams, assignments, discussions

11. Course evaluation

T	Evaluation methods	Evaluation date (one week)	Class	% Relative weight
1	Theoretical final report + practical reports	My theory is 15 weeks My work is weeks 15-1	7 theoretical 6 + practical	%13
2	Short testQuiz1	weeks 3	4 theoretical 2 + practical	%6
3	Midtermexam (theoretical and practical)	weeks 9	10 theoretical 5 + practical	%15

4	Short test2Quiz	weeks 12	4 theoretical 2 + practical	%6
5	Final practical test	Practical exams week	20	%20
6	Final theoretical test	The week of theoretical exams	40	%40
	the total		100	100

12. Learning and teaching resources

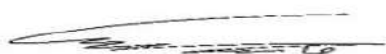
Required textbooks (methodology, if any)	Book of medicinal and aromatic plants Dr.. Ammar Al-Atarjji Dr.. Iyad Al-Daoudi
Main references (sources)	Binding to the most important methods for extracting effective materials from teaching preparation
Recommended supporting books and references (scientific (...journals, reports	Journal of Medicinal Plants / Kirkuk University
Electronic references, Internet sites	Medical Plants



Practical subject teacher
Assistant teacher
Zohoor Fuaad Abdaljabar

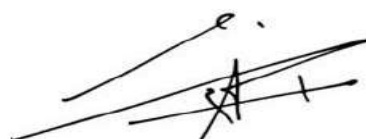


Theoretical subject teacher
Assistant Professor
Fanar Hashim Yousif



Chairman of the Scientific Committee

Prof. Dr. Jassim Mohammed Alwan



Head of the department

Prof. Dr. Asmaa Muhammad Adel

