

Module (Course Syllabus) Catalogue

2023-2024

College/ Institute	Khabat Technical Institute	
Department	Medicinal plant production	
Module Name	Processing Technology of Medicinal plants	
Module Code	PTM403	
Semester	5	
Credits	8	
Module type	Requisite <input checked="" type="checkbox"/>	Core <input type="checkbox"/> Assist. <input type="checkbox"/>
Weekly hours	5	
Weekly hours (Theory)	(2) hr Class	(2) Total hrs. Workload
Weekly hours (Practical)	(3) hr Class	(4.5) Total hrs. Workload
Lecturer (Theory)	Nahla Jawher Kareem	
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Lecturer (Practical)	Nahla Jawher Kareem Karwan Talaat Mohammed	
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Course Book

Course Description	The lectures include most of the treatments that are performed on medicinal plants before using them. Starting from planting and caring for it until the time of harvesting. The lectures also include how to extract active substances from plants and their types
Course objectives	Knowledge of good extraction methods for medicinal plants Appropriate methods for storing them in the laboratory. How to benefit from it How to plant and care for it during growth.
Student's obligation	1- Seminar 2- Presentation 3- Homework 4- Group Report 5- Quiz
Required Learning Materials	The lectures are presented in classes to students in different ways including data show, PowerPoint, manual papers and black and white boards. However, they are presented to student via lecturers' portal in university's website.
Assessment scheme	25% Mid Term (Theory and practical) 6% Quiz 29% Assignment (report, paper, homework, seminar.) 20% final practical 20% final theory
Specific learning outcome:	1 -The student learns how to grow and care for medicinal plants. 2 - How to harvest parts of medicinal plants. 3 - The student learns methods of extracting medicinal plants using chemical solvents. 4 - Knowledge of chemicals in medicinal plants. 5 - Identify some medicinal plants and benefit from them.

Course References:	<p>-Rajawi, Ali. Technology of medicinal and aromatic plants, basics of production and medicinal plants. 1992. Anglo-Egyptian Library.</p> <p>-Al-Dajwi, Ali. Encyclopedia of medicinal and aromatic plants - Book Two. 1996. Madbouly Library. Egypt.</p> <p>-Heikal, Muhammad Sayyid and Abdullah Abdul Razzaq Omar, medicinal and aromatic plants, their chemistry, production, and benefits. 2000. Knowledge facility.</p> <p>-Barsim, Bassem Kazem. Medicinal plants. 2014. Dar Al-Radwan for Publishing and Distribution.</p>	
Course topics (Theory)	Week	Learning Outcome
Methods of producing medicinal plants, growing medicinal plants, methods of propagation Extraction techniques of medicinal plants	1	
Collecting and preparing medicinal plants (collecting flowers, leaves, peels, roots, seeds, fruits)	2	
Medicinal plants are stored after drying	3	
1 -Distillation extraction (with water, steam, water and steam)	4	
2 -Extraction with Soxhlet (water, alcohol)	5	
3 -Extraction with hot and cold water	6	
4 -Extraction by boiling	7	
5 -Extraction by fermentation	8	
6 -The opposite current	9	
7 -Microwave extraction	10	
8 -Ultrasonic extraction	11	
Examples of medicinal plants	12	
Practical Topics	Week	Learning Outcome
Tools and equipment used in plant material extraction laboratories	1	
Collection and processing of medicinal plants	2	
Medicinal plants are stored after drying in lab.	3	

1 -Distillation extraction (with water, steam, water and steam)	4	
2 -Extraction with Soxhlet (water, alcohol)	5	
3 -Extraction with hot and cold water	6	
4 -Extraction by boiling	7	
5 -Extraction by fermentation	8	
6 -The opposite current	9	
7 -Microwave extraction	10	
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Examples of medicinal plants	12	

Questions

Q- Define the medicinal plant.

Q-What is the importance of medicinal plants?

Q-How are medicinal plants collected according to their parts?

Q-What are the ways to preserve medicinal plants after drying them?

Q-Number of toxic effects of plant extracts.

Q-What are the active ingredients in medical plants?

Q-List the advantages and disadvantages of the Soxhlet extraction method

Q-Give five examples of medicinal plants found in the home.

Q-How is extraction done by boiling?

Q-Extraction is known as distillation. Then how many types?

Extra notes:

External Evaluator