

Course Description Form

1. Course Name:					
Principles of Horticultural Science					
2. Course Code:					
PRHS116					
3. Semester / Year:					
Second semester/first stage/2023-2024					
4. Description Preparation Date:					
1/2/2024					
5. Available Attendance Forms:					
My presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
Theoretical 2 + 3 practical/3.5 units					
7. Course administrator's name (mention all, if more than one name)					
M.D. Noha Waleed Qader Email:- noha.waleed@uomosul.edu.iq					
M. M. Ahmmed Tariq					
8. Course Objectives					
<ul style="list-style-type: none"> • The learner should be able to understand and comprehend what is related to the subject of principles of horticulture and its relationship to other sciences • Their selection of important agricultural processes in horticultural plants • Differentiating between different planning systems and the appropriate ones • Understand the basics and concepts of horticulture • Distinguish between processes that are suitable for fruit, vegetable and ornamental crops • Familiarity with the information the farmer needs and what is available to him to understand the science of horticulture and its divisions • Agricultural awareness of the factors affecting yield • Determine methods of producing seeds in horticultural crops and methods of caring for them in terms of storage and marketing • A comprehensive study on how to establish vegetable farms or fruit orchards and establish nurseries for horticultural plants 					
9. Teaching and Learning Strategies					
- Interactive lecture -Brainstorming - Dialogue and discussion -Field Training - Practical exercises - Field project -Self-education					
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	A1: Learn about the concept of horticulture, its divisions, definition and classification A2: Describe horticulture A1: Mention the branches of horticulture A2: Give examples of the branches of horticulture A3: Table of horticultural crops according to their classification D1: Enumerates the branches of horticulture C1: Horticultural Crops Department	An overview of the concept of horticulture. The branches of horticulture and the division of horticultural crops	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams, assignments, discussions
	3 practical	A1: Define the science of horticulture A5 Distinguish the most important branches of horticulture	Horticultural foundations	Practical assignment With tasks And report	Short exams Assignment of duty discussions
2	2 Theoretical	A1: Known as vegetable crops A4: It has the ability to compare summer and winter vegetable crops	Reasons for the development of vegetable cultivation in Iraq and examples of	auditory methods, Writing style on the blackboard	Short exams Assignment of duty

		C1: It has the ability to divide vegetable crops according to the growth period	vegetables Dividing vegetable crops	Dialogue style Direct slides PowerPoint	discussions
	3 practical	A1 Mention the general characteristics that must be present in the growing medium A2 Explain the components of a wood canopy	Horticultural facility	practical Assignment tasks And report	Short exams Assignment of duty discussions
3	2 Theoretical	A1: Mentions the reasons for the development of vegetable cultivation in Iraq. Then give examples of vegetable crops according to the period of growth and the nature of growth A4: Discusses the most important reasons for the development of vegetable cultivation in Iraq B3: Shows the importance of vegetable crops in terms of nutritional value C2: Write a report on the nutritional importance of vegetable crops C1: Vegetable crops are divided according to the botanical division based on the structural and anatomical specifications of the plants.	Reasons for the development of vegetable cultivation in Iraq. The nutritional value and botanical division of vegetable crops.	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams Assignment of duty discussions
	3 practical	A1 Define seed reproduction and its features	Seed reproduction	practical Assignment tasks And report	Short exams Assignment of duty discussions
4	2 Theoretical	C1: Divide vegetable crops according to the edible part C1: Divide vegetable crops according to the part that is eaten C1: Plants are divided according to their thermal needs, as each vegetable crop has a specific range of temperatures that suit its growth. B2: Explains the effect of environmental conditions on vegetable production in Iraq	Dividing vegetable crops	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams Assignment of duty
	3 practical	A1 Define vegetative reproduction and its features).	Vegetative propagation	practical Assignment tasks And report	Short exams Assignment of duty discussions
5	2 Theoretical	B3: Shows the impact of technical factors on the production of vegetable crops in Iraq B2: Explains the effect of weather conditions on vegetable crops in Iraq	Problems of growing vegetables in Iraq	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams, assignments , discussions
	3 practical	A1 Define the following terms (Fertilizer, Manor) A4 Difference Between inorganic fertilizers and organic fertilizers	Fertilization	practical Assignment tasks And report	Short exams Assignment of duty discussions
6	2 Theoretical	C1: List the weather factors that affect vegetable crops D1: Explain the effect of weather factors on crops B3: Shows the effect of weather factors that affect vegetable crops B2: Explains how growth regulators affect vegetable crops B2: The effect of temperature shows the growth of vegetable crops	Factors affecting the growth of vegetable crops	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams, assignments , discussions

		B2: Explains the effect of lighting on the growth of vegetable crops B2: Explains the effect of CO2 on plants			
	3 practical	A1: Number of irrigation methods	Irrigation.	practical Assignment tasks And report	Short exams Assignment of duty discussions
7	2 Theoretical	: Known as sexual reproduction B3: Shows how the farmer is satisfied with the limited income in Iraq A1: Seed lobe B3: Shows the characteristics of good seeds with a drawing C1: Enumerates the methods of planting seeds A1: Known as seedlings B3: Explains the importance of transplantation and the factors that affect the success of the transplantation process C1: Vegetable crops are divided according to their tolerance to transplantation, with examples A1: Knows localization C1: Enumerates the methods of localization	Reproduction of vegetable crops (sexual)	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams, assignments, discussions
	3 practical	A1: Define the pruning process and the purposes of pruning A1: Mention the types of pruning and explain the pruning in terms of the amount of wood removed A1: Mention the different education methods	Pruning	practical Assignment tasks And report	Discussing student report
8	2 Theoretical	A1: Known as vegetative propagation B2: Explains the methods of multiplication in detail C1: List the methods of asexual reproduction	Asexual reproduction of vegetable crops	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point	Short exams, assignments, discussions
	3 practical	Discussing student reports	Semester test I).	practical Assignment tasks And report	Short exams Assignment of duty discussions
9	2 Theoretical	C1: Section of the flowering system in vegetable crops in detail B3: Explain the types of pollination in vegetable crops in detail	Flowering and fruit setting in vegetable crops	auditory methods, Writing style on the blackboard Dialogue style Direct slides Power Point practical Assignment tasks And report	Short exams, assignments, discussions
	3 practical	A1 State the conditions for establishing orchids	fruit garden	practical Assignment tasks And report	Short exams Assignment of duty discussions
10	3Theoretical	The basics of classification of fruit trees B3: Shows the importance of the nutritional value of fruit A4: Discusses	Second: Fruit trees	practical Assignment tasks And report	Short exams Assignment of duty discussions

		<p>the situation of fruits in Iraq</p> <p>B3: Shows the influence of factors on the success of fruit cultivation</p> <p>A4: Discusses the harmful and beneficial effects of low temperatures</p> <p>B2: Explains the effect of air humidity and rain</p> <p>B3: Shows the effect of wind on fruit trees</p> <p>B3: Shows the effect of light on fruit trees</p> <p>B3: Shows the effect of ground water level on fruit tree</p> <p>D5: Explain the relationship between irrigation and the cultivation of fruit trees</p> <p>A4: Explains the effect of irrigation water and its relationship to the success of fruit trees</p>			
	3 practical	<p>A1 Define the agricultural cycle</p> <p>A1 Mention the qualities of good alternation</p> <p>A1 Mention the steps for designing the course required per unit area.</p> <p>A scientific visit to one of the centers Seed Inspection And certification.</p>	Agricultural cycle.	practical Assignment tasks And report	Short exams Assignment of duty discussions
11	3 Theoretical	<p>A1: Sexual reproduction is known in fruit trees</p> <p>B3: Explains the advantages and disadvantages of this method</p> <p>C1: Divides the seeds according to embryos</p> <p>A1: Vegetative reproduction is known. Mention its features</p> <p>A1: Lists the methods of vegetative propagation in detail</p> <p>: A1 defines stillness</p> <p>C1: Enumerates ways to break silence</p> <p>A1 defines vaccination</p> <p>A4: It distinguishes between grafted seedlings and non-grafted seedlings</p> <p>B3: Explains the conditions for successful grafting, then the most important operations that are performed after grafting, then explains the principles used in propagating some fruit trees.</p> <p>D5: Distinguish between grafting and mounting</p> <p>A1: Knows the composition</p> <p>B3: Shows the types of installation</p> <p>A1: Known as pruning</p> <p>B3: Shows the benefits of pruning</p> <p>C1: The pruning is divided into several sections, mention them</p>	Methods of reproduction of fruit plants	practical Assignment tasks And report	
	3 practical	A1 State the conditions for choosing the nursery site	Nurseries	practical Assignment tasks And report	Short exams Assignment of duty discussions
12	2 Theoretical	<p>A1: He knows the nursery</p> <p>B3: It indicates certain conditions for the successful establishment of a nursery in any area that must be met</p>	Arboretum	practical Assignment tasks And report	Short exams Assignment of duty

		A1: He mentions the conditions necessary to protect and produce seedlings in the nursery, including these conditions B3: Shows the types of nurseries B6: He plans to establish a nursery			discussions
	3 practical	B1 The number of general characteristics that must be available in the growing medium A1 Mention the types of anvils used in multiplication.	Anvils and containers used in propagating and developing plants	practical Assignment tasks And report	Short exams Assignment of duty discussions
13	2Theoretical	C1: Divide ornamental plants, then enumerate the methods of propagating ornamental plants	Third: Ornamental Plants	practical Assignment tasks And report	Short exams Assignment of duty discussions
	3 practical	B1Practicing field work and planting some plant seeds	Second semester exam	practical Assignment tasks And report	Short exams Assignment of duty discussion
14	2Theoretical	A1: Understand what is meant by the agricultural cycle , then mention the benefits of the agricultural cycle B3: List the important points that must be taken into consideration when designing the agricultural cycle A1: Understand what is meant by intercropping, then mention its benefits and disadvantages of intercropping	Agricultural cycle:	practical Assignment tasks And report	exams Assignment of duty discussion
	3 practical	A2 Describe the sections of ornamental bulbs	Bulbs	Discussing student reports	Short exams Assignment of dutydiscussions
15	2Theoretical	A PowerPoint presentation on plants and a scientific visit to the horticulture station and private nurseries	A Power Point presentation on plants and a scientific visit to the horticulture station and private nurseries	a scientific visit to the horticulture station and private nurseries	Short exams Assignment
	3 practical	A field visit to the Nineveh Horticulture Station and the private nurseries.	A Power Point presentation on lants and a scientific visit to the horticulture station and private nurseries	a scientific visit to the horticulture station and private nurseries	Assigning tasks and reporting

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Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, and reports.

12. Learning and Teaching Resources

Required textbooks (methodology, if any)	Learning and teaching resources Gardening principles book, Part 1 and Part 2
Main references (sources)	Scientific references specialized in fruit trees, vegetables, greenhouses, and books related to nurseries
Recommended books and references (scientific journals, reports...)	Principles of horticulture Dr. Karim Saleh Abdul and Dr. Saad Zaghoul Principles of Horticulture, written by Dr. Faisal Rashid Nasser
Electronic References, Websites	https://exa.unne.edu.ar/ Principles of Horticultural Science

Practical subject teacher
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Theoretical subject teacher
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Chairman of the scientific committee
Professor

~~أ.د. الاى محمد عبدالله~~