Course Description Form

1. Course Name:

Gardening principles

2. Course Code:

PRHS116

3. Semester / Year:

First semester (autumn)/2023-2024

4. Description Preparation Date:

1/2/2024

5. Available Attendance Forms:

Attendance lesson

6. Number of Credit Hours (Total) / Number of Units (Total): units

2 theoretical + 3 practical / 3.5 units

7. Course administrator's name (mention all, if more than one name):

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8. Course Objectives

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	Name of Unit or subject	Learning method	Evaluation method
First	2Theoretical	A1: Learn about the concept of horticulture, its divisions and definition B1: He possesses practical and mental knowledge and concepts that help him in his knowledge of the divisions of horticulture D3: Community members participate and work to educate them about the economic and nutritional importance of vegetable crops E1: Contributes to knowing the number of divisions of vegetable crops	An overview of the concept of horticulture, its benefits, and an introduction and definition of horticulture	**Interactive lecture, brainstorming, dialogue and discussion, self-learning**	Interactive lecture, brainstorming, dialogue and discussion, self-learning
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work	Learn about practical concepts and agricultural operations related to horticulture principles	Interactive lecture, brainstorming, dialogue and discussion, field training, and self-learning	Short practical test1
Second	2Theoretical	A2: Determines the factors affecting the growth of vegetable crops B1: He possesses the practical and mental knowledge and concepts that help him carry out the necessary agricultural operations C5: Successfully balances the investment and use of fruit, vegetable and ornamental plants and employs them in a way that is compatible with the important agricultural operations carried out on crops.	Factors affecting the growth of vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Scientific tour of horticultural facilities
	3Practical	C3: It uses the information the farmer needs to divide vegetable crops to facilitate studying the production of these crops A2 Determines methods of growing horticultural crops	How to identify horticultural facilities and detect agricultural environments	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	Scientific tour of horticultural facilities
Third	2Theoretical	A2: Determines methods of propagation of vegetable crops and their specifications	Sexual reproduction and its specifications	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester exam 1, final exam
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work A1: List the most prominent methods of vegetative propagation with plant examples D1: Acquire the communication skills necessary to deal with confidence and certainty on all topics related to crop production	How to train to carry out some important agricultural operations to increase and improve production	Interactive lecture, brainstorming, dialogue and discussion, field training, and self-learning	Short test
Fourth	2Theoretical	A2: It defines a definition of regionalization, what its methods are, and how it is conducted C4: Draw plans and methods for planting hybrid seeds D3: Community members participate in the economic importance of vegetable crops E1: It contributes to enhancing the benefits of conducting important	The general foundations and principles used in carrying out agricultural operations	Identify the benefits of acclimatization and its effect on plants and their resistance to harsh environmental conditions	Semester test 1, final test, report

		agricultural operations and their benefit in increasing and improving production			
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of irrigation and the application of its various methods C5: Successfully balances investment and use of vegetable and fruit crops and employs them in accordance with market requirements	Identify the benefits of acclimatization and its effect on plants and their resistance to harsh environmental conditions	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	Short practical test 2
Fifth	2Theoretical	C4: Draws up plans and programs for reproductive divisions and their benefits D3: Community members participate and work to educate them about the importance of solving all problems related to vegetable production in Iraq E1: It contributes to enhancing the economic importance of vegetable and fruit crops by increasing economic returns	Climatic conditions and their impact on garden landscaping, the choice of plants, and the factors on which garden design depends	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester test 1, final test, report
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draw a diagram and a brief overview of the hierarchical shape of trees D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and collective levels between the farmer and the beneficiary of the crop	Different methods of raising trees by pruning	Interactive lecture, brainstorming, dialogue and discussion, self-learning	writing a report
Sixth	2Theoretical	A2: Determines flowering systems in vegetable crops C4: Draw plans and programs to determine flowering systems in vegetable crops D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels D3: Community members participate and work to educate them about the importance of plant crops and increasing the level of production E1: It contributes to mentioning the factors influencing the success of the transplantation process	Nutritional value of vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Short test, final test
	3Practical	C2: Innovates methods for breeding and improving different types of varieties designed for harsh environmental conditions C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of agriculture	The basic factors that increase the quality of the yield	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Write a report and homework
Seventh	2Theoretical	A3: It employs structural and technical facilities to divide the fruit into several distinct areas C4: Draws up plans and programs for development in the field of applying important agricultural operations to fruit and vegetable trees	Uses of greenhouses and wooden canopies in the production of various crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester exam 2, final exam
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of agriculture C5: Successfully balances the effects of harmful low temperatures and	A scientific visit to one of the horticultural facilities	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Short test

		beneficial low temperatures D1: Acquiring farmers' communication skills necessary to deal with confidence and certainty at the individual and collective levels			
eighth	2Theoretical	A3: Employs horticultural facilities to carry out agricultural operations C4: Draws up plans and programs for development in the field of crop cultivation of fruit trees, vegetables, and ornamental plants	Available horticultural facilities and surrounding weather conditions	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester exam 2, final exam
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of crop cultivation, fruit trees, vegetables, and ornamental plants C5: Successfully balances investment, use and employment of fruit trees to suit agricultural service operations	Practical steps on how to plant fruit trees	Interactive lecture, brainstorming, dialogue and discussion, self-learning	writing a report
Ninth	2Theoretical	E4 determines the difference between the rest phase and the rest phase C3: Uses the information the farmer needs and what is available to him to master his work	The concept of the effect of temperature on the growth of fruit trees	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester exam 2, final exam
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of agricultural operations important for crop production C5: Successfully balances how to design a semi-intensive cropping cycle	Designing an agricultural cycle to improve production and crop visits	Interactive lecture, brainstorming, dialogue and discussion, self-learning	short exam
Tenth	2Theoretical	A2: Determines what are the effects of weather factors on growing fruit trees C5: Successfully balances the investment, use and employment of facilities with service operations	Types of horticultural facilities	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester test2
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs to protect and produce seedlings in the nursery C5: Successfully balances the conditions for successful nursery production	Practical steps for designing and establishing a nursery	Interactive lecture, brainstorming, dialogue and discussion, self-learning	short exam
Eleventh	2Theoretical	A2: Determines what are the effects of weather factors on growing fruit trees C5: Successfully balances the investment, use and employment of facilities with service operations	Types of horticultural facilities	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester test2
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs to protect and produce seedlings in the nursery C5: Successfully balances the conditions for successful nursery production	Practical steps for designing and establishing a nursery	Interactive lecture, brainstorming, dialogue and discussion, self-learning	short exam
Twelveth	2Theoretical	A2: Determines the reproductive systems between sexual reproduction and vegetative reproduction C5: Successfully balances the divisions of Iraq in terms of planting fruit trees and their	Divisions of areas in terms of growing fruit trees	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Final test

		divisions			
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs on the most prominent methods of growing vegetable crops in Iraq	Practical steps for growing vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	writing a report
Thirteenth	2Theoretical	A2: Defines the difference between pruning and layering C3: Uses the information the farmer needs and what is available to him to master his work	How to carry out agricultural operations, including thinning and pruning	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Final test
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of cultivation of deciduous and perennial fruit trees C5: Successfully balances investment, use and employment of facilities to suit agricultural operations	Methods of growing vegetable crops in Iraq	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Wooden canopy tour
Fourteenth	2Theoretical	C3: Uses the information the farmer needs and what is available to him to master his work C5: Successfully balances investment and use of horticultural facilities and employs them appropriately to the crops grown within the facility.	Designing an agricultural cycle for vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Short test, final test
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of growing vegetables, fruits, and ornamental plants C5: Successfully balances investment, use and employment of facilities to suit agricultural operations D2: Dealing with modern technology efficiently enables it to produce high yields	Designing an agricultural cycle for fruit trees	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Short practical test3
Fifteenth	2Theoretical	C4: Draws up plans and programs for development in the field of growing vegetable, fruit and ornamental crops within horticultural facilities C5: Successfully balances investment, use and employment of facilities to suit agricultural operations	Practical steps for dividing the nursery and distributing the plants within it	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Short test, final test
	3Practical	C3: Uses the information the farmer needs and what is available to him to master his work C4: Draws up plans and programs for development in the field of cultivation and production of trees and various plants C5: Successfully balances investment, use and employment of facilities to suit agricultural operations D1: Acquiring the communication skills necessary for the farmer to deal with confidence and certainty at the individual and collective levels with the labor market and product disposal. D2: Dealing with modern technology efficiently that enables him to accomplish his scientific and practical tasks	The effects of environmental conditions on yield	Interactive lecture, brainstorming, dialogue and discussion, self-learning	A tour of the canopy and the greenhouse inside the university

11. Course Evaluation	
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 tr vegetables, greenhouses, and books related nurseries
Recommended books and references (scientific journals, reports…)	Principles of horticulture Dr. Karim Saleh Al and Dr. Saad Zaghloul Principles of Horticult written by Dr. Faisal Rashid Nasser
Electronic References, Websites	**https://exa.unne.edu.ar/** Principles of Horticultural Science

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