

## Course Description Form

1. Course Name:
Fruit production
2. Course Code
FRPR208
3. Semester / Year:
Second semester/ First stage/2023-2024
4. Description Preparation Date:
1/2/2024
5. Available Attendance Forms:
Attending
6. Number of Credit Hours (Total) / Number of Units (Total)
1 Theoretical + 3 Practical / 2.5 unite
7. Course administrator's name (mention all, if more than one name)
Name: Assistant Professor.Dr.Ayad Tariq Mahmmaod Email: <a href="mailto:ayadtariq75@uomosul.edu.iq">ayadtariq75@uomosul.edu.iq</a>  Name: Assistant Lecturer Ahmed Tariq Khalil Email: <a href="mailto:ahmed.tarik@uomosul.edu.iq">ahmed.tarik@uomosul.edu.iq</a>
8. Course Objectives
<ul style="list-style-type: none"><li>• The learner should be able to determine the needs of fruit trees from environmental conditions</li><li>• The student learns about the stages of growth and maturity that fruits go through</li><li>• Familiarity with different cultivation systems for fruit trees</li><li>• Familiarity with all horticultural service operations to sustain fruit orchards</li><li>• Understanding the basics of tree development and fertilization to obtain ideal trees and fruits</li><li>• Distinguishing between types of trees according to the nature of their growth</li><li>• Familiarity with the information the farmer needs to establish and plan fruit orchards</li><li>• The student's awareness of all methods of propagating fruit trees and the advantages and disadvantages of each of them</li><li>• Finding solutions to many of the problems faced by producers of fruit trees and fruit orchards</li><li>• A comprehensive study of the needs of the different types of deciduous and evergreen fruit trees and how to preserve them and determine the controls and conditions that must be observed when sustaining them for the longest possible period</li></ul>
9. Teaching and Learning Strategies
<ul style="list-style-type: none"><li>- Interactive lecture</li><li>- Brainstorming</li><li>- Dialogue and discussion</li><li>- Field Training</li><li>- Practical exercises</li><li>- Field project</li><li>- Self-education</li></ul>
10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1 Theoretical	A1: The student is introduced to fruit science and the divisions of fruit trees. A2: The student learns about the environmental conditions necessary for the growth of fruit trees	Fruit science and environmental conditions suitable for fruit trees	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C2: Uses the information the student needs and what is available to him to master his work	Learn about the practical concepts of fruit science	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
2	1 Theoretical	A3: The student is familiar with the types of soil and soil suitable for growing fruit trees	Establishing and planning the orchard	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C3: Uses the information the student needs and what is available to him to master his work	How to identify fruit trees and distinguish between them (varieties, order, family, etc.)	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
3	1 Theoretical	A4: The student identifies the types of orchards and the conditions for establishing them B1: Choose the appropriate farming system for each type of fruit B1: Calculates the amount of trees needed to plant any orchard C1: Names all fruits by their English, scientific, and family names.	Systems and dates for planting fruit trees	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C4: Uses the information the student needs and what is available to him to master his work C5: Draws up plans and programs for development in the field of fruit production in accordance with the requirements of the environment and society D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	How to practice choosing a site to establish an orchard	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
4	1 Theoretical	A5: The student is familiar with pruning and breeding methods. A2: The student explains the methods of sexual and vegetative reproduction	Sexual and vegetative reproduction have their advantages	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment

			and disadvantages		
	3 Practical	C6: Uses the information the student needs and what is available to him to master his work C7: Draws up plans and programs for development in the field of fruit production in accordance with the Short test, written test, and assignment requirements of the environment and society C5: Successfully balances the investment and use of fruit plants and uses them appropriately for the region in which they are grown	Identify the appropriate environmental conditions for growing fruit trees	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
5	1 Theoretical	A6: It solves the problems of difficulty in growing some fruits B2: Recommend any successful propagation methods for the fruit species	How to overcome the problems of fruit tree	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C8: Uses the information the student needs and what is available to him to master his work C9: Draws up plans and programs for development in the field of fruit production in accordance with the requirements of the environment and society D2: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	propagation Practical steps for planning orchard land	Interactive lecture, brainstorming, dialogue and discussion	
6	1 Theoretical	B3: Suggests the method and type of fertilizer added to the type of fruit B4: Determines the nutrient deficiency of the type of fruit	Fertilizing fruit trees, methods, and dates for adding them	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C10: Creates new systems for types of orchards by hand, using modern computer applications, and with the ability to select plants according to the prevailing climatic conditions. C11: Uses the information the student needs and what is available to him to master his work C12: Draws up plans and programs for development in the field of fruit production in accordance with the requirements of the environment and society C13: Successfully balances the investment and use of fruit plants and uses them appropriately for the region in which they are grown	Drawing the agricultural systems of the orchard	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1

7	1 Theoretical	A7: The student is familiar with the nature of growth and environmental needs of apple trees. A2: The student is familiar with the most important principles of apple trees. A8: The student is familiar with the methods of planting and caring for apple trees. A9: The student is familiar with methods of setting and breaking fruit seeds and horticultural service operations	Apples, origin and original habitat: environmental conditions and assets used, service operations, cultivation, flowering, pollination, maturity, and control.	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C14: Creates new systems for types of orchards by hand, using modern computer applications, and with the ability to select plants according to the prevailing climatic conditions. C15: Uses the information the student needs and what is available to him to master his work C16: Draws up plans and programs for development in the field of fruit production in accordance with the requirements of the environment and society C17: Successfully balances the investment and use of fruit plants and uses them appropriately for the region in which they are grown D3: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	A scientific visit to one of the private orchards, focusing on agricultural systems	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
8	1 Theoretical	A10: The student is familiar with the nature of growth and environmental needs of olive trees.	Olives, origin and original habitat: environmental conditions	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C18: Uses the information the student needs and what is available to him to master his work C19: Successfully balances the investment and use of the pruning process and employs it in a way that is compatible with the processes of crop production and tree coordination.	Practical steps for pruning fruit trees	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
9	1 Theoretical	A11: The student is familiar with methods of setting and breaking dormancy for fruit seeds and horticultural service operations for olives	Olives, service operations, cultivation, flowering, pollination, ripening, and control	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment

	3 Practical	<p>C20: Creates new systems for types of orchards by hand, using modern computer applications, and with the ability to select plants according to the prevailing climatic conditions.</p> <p>C21: Uses the information the student needs and what is available to him to master his work</p> <p>A2: It determines the types of fruit trees to be raised, the different breeding methods, and their economic and environmental importance</p> <p>C22: Successfully balances the investment and use of the pruning process and employs it in a way that is compatible with the processes of crop production and tree coordination.</p>	Practical steps for raising fruit trees	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
10	1 Theoretical	A12: The student is familiar with the nature of growth and environmental needs of peach trees.	Peaches, origin and original habitat: environmental conditions	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	<p>A17: Determines the types of fruit seeds and cultivation methods</p> <p>C23: Uses the information the student needs and what is available to him to master his work</p> <p>C24: Draws up plans and programs for development in the field of fruit seed cultivation in accordance with environmental, economic and societal requirements</p> <p>C25: Successfully balances the investment and use of the pruning process and employs it in a way that is compatible with the processes of crop production and tree coordination.</p>	Practical steps for planting fruit seeds	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
11	1 Theoretical	A13: The student is familiar with methods of setting and breaking dormancy for fruit seeds and horticultural service operations for peaches	<b>Peaches, service operations, cultivation, flowering, pollination, ripening, and control</b>	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	<p>A18: Determines the method of vegetative propagation of fruit trees</p> <p>C26: Uses the information the student needs and what is available to him to master his work</p>	<b>Practical steps for vegetative propagation of fruit trees</b>	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1

		C27: Successfully balances investment in vegetative propagation methods and employs them appropriately to produce plants			
12	1 Theoretical	A14: The student is familiar with the nature of growth and environmental needs of pomegranate trees.	<b>Pomegranate, origin and original habitat: environmental conditions</b>	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	A19: Determines the fertilization method for fruit trees C28: Uses the information the student needs and what is available to him to master his work C29: Draws up plans and programs for development in the field of fruit tree fertilization in accordance with the requirements of the environment, society, and economic conditions C30: Successfully balances the investment and use of fertilization and its employment in a way that is compatible with fruit production processes	<b>Practical steps for fertilizing fruit trees</b>	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
13	1 Theoretical	A15: The student is familiar with the nature of growth and environmental needs of pear trees.	Pears, origin and original habitat: environmental conditions, service operations, cultivation, flowering, pollination, maturity, and control.	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	A2: Determines the way the fruits of fruit trees ripen C31: Uses the information the student needs and what is available to him to master his work C32: Successfully balances the investment and use of fruit ripening methods in fruit trees and employs them in a way that is appropriate to production processes.	Practical steps for signs of ripening and harvesting fruits	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
14	1 Theoretical	A16: Discusses management skills and presentation of topics related to growing fruit trees	Report and discuss	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C33: Uses the information the student needs and what is available to him to master his work	Practical steps for olive cultivation	Interactive lecture, brainstorming, dialogue	Short practical test1

		C34: Draws up plans and programs for development in the field of olive tree cultivation in accordance with the requirements of the environment, society, and economic resources C35: Successfully balances the investment and use of olive trees and their employment in a way that is compatible with coordination and production processes D2: Dealing with modern technology efficiently that enables him to accomplish his scientific and practical tasks		and discussion	
15	1 Theoretical	B5: Conclude and recommend the most important requirements for growing fruit trees	Solve the problem	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	C36: Uses the information the student needs and what is available to him to master his work C37: Draws up plans and programs for development in the field of shellac production in accordance with the requirements of the environment, society, and economic resources D4: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels D5: Dealing with modern technology efficiently that enables him to accomplish his scientific and practical tasks	Fruit production project (STRAWBERRY)	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1

### 11. Course Evaluation

Evaluation Methods	Evaluation date (week)	Degree	Percentage (%)
Daily spoken examination	Theoretical: 2-15 Practical: 2 – 15	Theoretical 3 Practical 2	5%
Daily written exams	Theoretical: 2-15 Practical: 2 – 15	Theoretical 5 Practical 5	10%
2 semester exams during the semester for both practical and theoretical	Theoretical: 7-13 Practical: 6 – 14	Theoretical 10 Practical 5	15%
Assigning students to prepare reports on study topics	Theoretical: 15 Practical: 15	Theoretical 7 Practical 3	10%
Final exam	Theoretical Practical	Theoretical 40 Practical 20	40% 20%
Total		100	100%

### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Production of evergreen fruits. Dr. Jawad Thanoun Agha 2- Deciduous fruit technology (2017). Prof. Dr. Jassim Mohammed Alwan
Main references (sources)	
Recommended books and references (scientific journals, reports...)	1- Mesopotamia Agriculture Journal
Electronic References, Websites	FAO reports, bulletins and studies



**Theoretical lecturer:**

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