Course Description Form

1. Course Name:
Deciduous Fruit 1
2. Course Code
DEFR 304
3. Semester / Year:
First semester/ Three stage/ 2024-2025
4. Description Preparation Date:
1/9/2024
5. Available Attendance Forms:
In-person + online
6. Number of Credit Hours (Total) / Number of Units (Total)
2 Theoretical + 3 Practical / 3.5
7. Course administrator's name (mention all, if more than one name)
Name: Prof.Dr.Jassim Mohammad Alwan Email: jassim@uomosul.edu.iq Name: Dr.Yusra Mohammad Saleh Email: yousra.ms@uomosul.edu.iq Name: Ahamd Tarik Kalil Email: ahmed.tarik@uomosul.edu.iq
8. Course Objectives

Theoretical: 1. Introducing students to the most important types of deciduous fruits that can be successfully cultivated in Iraq. 2. Study the most important environmental requirements necessary for the successful cultivation of some types of deciduous fruits. 3. Enabling students to understand the most important horticultural operations that must be carried out in the orchards of some types of deciduous fruits. 4. Teaching students about the most important methods of propagation of some types of deciduous fruits and their most important origins. 5. Introducing students to the most important types of each type of fruit studied.	Practical: 1- Introducing students to the importance of deciduous fruit trees through their economic importance and botanical description, in addition to the most important foundations for dividing and classifying fruits. 2- Study the most important factors affecting the growth and production of deciduous fruits. 3- Enabling the student to propagate some types of deciduous fruits by sexual or vegetative propagation methods. 4- Enabling students to carry out trainning and pruning operations for some deciduous fruit trees. 5- Teaching students the scientific foundations of establishing deciduous fruit orchards, in addition to how to perform some service operations such as

	irrigation, fertilization, trainning, thinning, pruning, and harvesting.

9. Teaching and Learning Strategies

Theoretical 1- Live lectures with students. 2- PowerPoint slides. 3- Introduction pictures. 4- Audio recordings. 5- Dialogues and discussion. 6- Assigning tasks and reports	Practical: 1- Live lectures with students. 2- PowerPoint slides. 3- Scientific visits to fruit orchards. 4- Applying some practical skills in nursery facilities? 5- Dialogues and discussions with students. 6- Assigning tasks and reports

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical 3 practical	Theoretical: A1:The student masters the scientific name of apples and learns the most important specifications of apple trees, the appropriate environment, the most important principles, and methods of planting seedlings in the orchard. practical: A1:The student learns about the economic importance of fruit trees and masters the parts of the entire deciduous tree and the importance of each part.	theoretical: Apples: scientific name, distribution, economic importance, botanical description, climate, soil, propagation, methods for establishing an apple orchard, planting seedlings in the orchard. practical: The economic importance of deciduous fruit trees, botanical description of deciduous fruit trees.	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical: Assigning practical tasks and reports	Short exams, assignments, discussions
2	2 Theoretical 3 practical	Theoretical: C4:The student masters the nature of fruit bearing and all horticultural service operations for apple orchards. practical : C6:The student learns about the most important factors affecting the growth and production of fruit trees.	theoretical: Apples: pruning and breeding, irrigation, fertilization, flowering and pollination, the nature of fruit bearing, fruit thinning, harvesting, indications of fruit maturity, varieties. practical:	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical: Assigning practical	Short exams, assignments, discussions

			First: Climate factors: temperature (damages of high temperatures)	tasks and reports	
3	2 Theoretical 3 practical	theoretical: C1:The student learns the most important types of pears, their scientific names, tree specifications, the appropriate environment for them, the most important principles, and methods of planting seedlings in the orchard. practical: A1:The student learns about the most important climatic factors affecting the growth and fruiting of fruit trees.	theoretical: Pears: scientific name, distribution, economic importance, botanical description, pear types, climate, soil, propagation, methods for establishing a pear orchard, planting seedlings in the orchard. practical Second: Climate factors (damages of low temperatures and freezes)	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
4	2 Theoretical 3 practical	Theoretical A2:The student is familiar with the nature of fruit bearing and all horticultural service operations for pear orchards. practical : A2: The student identifies the factors affecting the growth and production of fruit trees	theoretical: Pears: pruning and breeding, irrigation, fertilization, flowering and pollination, nature of fruit bearing, fruit thinning, harvesting, indications of fruit maturity, varieties. practical: Light, air humidity and rain	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
5	2 Theoretical 3 practical	theoretical: A1:The student knows the scientific name of quince and learns the most important characteristics of trees, the appropriate environment, the most important principles, and methods of planting seedlings in the orchard. practical:	theoretical: Quince: scientific name, distribution, economic importance, botanical description, climate, soil, propagation, methods of establishing a quince orchard, planting seedlings in the orchard. practical:	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical	Short exams, assignments, discussions

		A2: The student is familiar with the factors affecting the growth and production of fruit trees	Soil humidity and wind	tasks and reports	
6	2 Theoretical 3 practical	Theoretical: A2:The student learns about tree flowering, the nature of fruit bearing, and all horticultural service operations for quince orchards. practical : A2: The student learns about the second environmental factor affecting tree growth, which is the soil factor.	theoretical: Quince: pruning and trainning, irrigation, fertilization, flowering and pollination, the nature of fruit bearing, fruit thinning, harvesting, indications of fruit maturity, varieties. practical: The importance of soil for plants, soil salinity, soil fertility, soil aeration, soil moisture content, soil organisms, soil organic matter, soil toxicity, ground water in the soil	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
7	2 Theoretical 3 practical	theoretical: A2: The student is familiar with the scientific name of the fig, the characteristics of the trees, the appropriate environment for them, the most important principles, and methods of planting seedlings in the orchard. practical: A2: The student learns about the vegetative strain.	theoretical: Figs: scientific name, distribution, economic importance, botanical description, climate, soil, propagation, methods for establishing a fig orchard, planting seedlings in the orchard, first monthly exam. practical: . The vegetative strain and its importance, morphological differences in the vegetative strain, the reasons leading to the deterioration	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions

			of the vegetative strain.		
8	2 Theoretical 3 practical	Theoretical C6: The student masters the nature of fruit bearing and all horticultural service operations for fig orchards. practical : A2: The student is familiar with methods of propagating deciduous fruit trees.	theoretical: Figs: pruning and trainning, irrigation, fertilization, flowering and pollination, the nature of fruit bearing, fruit thinning, harvesting, indications of fruit maturity, varieties. practical: Sexual reproduction, types or groups of seeds, comparison between seed and vegetative plants, seed formation Seed germination	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
9	2 Theoretical 3 practical	theoretical: A2: The student is familiar with the scientific name and medicinal benefits of pomegranates, the characteristics of trees and the appropriate environment for them, the most important principles, and methods of planting seedlings in the orchard. practical: A4: The student learns about seed dormancy.	theoretical: Pomegranate: scientific name, distribution, economic importance, botanical description, climate, soil, propagation, methods of establishing a pomegranate orchard, planting seedlings in the orchard. practical: Seed dormancy, types of dormancy, ways to get rid of dormancy	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
10	2 Theoretical 3 practical	Theoretical: A2: The student learns about tree flowering, the nature of fruit bearing, and all horticultural service operations for pomegranate orchards. practical :	theoretical: Pomegranates: pruning and trainning, irrigation, fertilization, flowering and pollination, the nature of fruit bearing, fruit thinning,	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion	Short exams, assignments, discussions

		C3: The student learns about the most important factors affecting seed planting.	harvesting, indications of fruit maturity, varieties. practical: Planting seeds, conditions that must be met for germination, and components of the seed	practical : Assigning practical tasks and reports	
11	2 Theoretical 3 practical	theoretical: A2: The student learns about the types of Mulberry, their scientific names, characteristics of trees, the appropriate environment for them, the most important principles, and methods of planting seedlings in the orchard. practical: A2: The student is familiar with the most important methods of propagating fruit trees vegetatively.	theoretical: Mulberry: scientific name, distribution, economic importance, botanical description, climate, soil, propagation, methods of establishing a mulberry orchard, planting seedlings in the orchard. practical: Vegetative propagation, purposes of vegetative propagation, the importance of using vegetative propagation	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
12	2 Theoretical 3 practical	theoretical: A2: The student is familiar with the nature of fruit bearing and all horticultural service operations for Mulberry orchards. practical: C2: The student learns about the most important mutations that occur in fruit trees.	theoretical: Mulberries: pruning and breeding, irrigation, fertilization, flowering and pollination, the nature of fruit bearing, fruit thinning, harvesting, indications of fruit maturity, varieties. practical: Mutations, causes of mutations, chimeras, types of chimeras,	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions

13	2 Theoretical 3 practical	Theoretical A2: The student learns about the types of persimmons, their scientific names, the characteristics of trees, the appropriate environment for them, the most important principles, and methods of planting seedlings in the orchard. practical : A2: The student is required to obtain a disease-free breed.	theoretical: Japanese persimmon: scientific name, distribution, economic importance, botanical description, climate, soil, propagation, methods for establishing a persimmon orchard, planting seedlings in the orchard. Second monthly exam. practical: Methods for obtaining a disease-free strain, and tests that must be performed to ensure that the vegetative strain is free of pathogens	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
14	2 Theoretical 3 practical	theoretical: A2: The student is familiar with the nature of bearing fruits, all horticultural service operations for persimmon orchards, and methods for removing the astringent material from the fruits. practical: A2: The student learns about the methods of vegetative propagation used in deciduous fruit trees.	theoretical: Japanese persimmon: pruning and trainning, irrigation, fertilization, flowering and pollination, nature of fruit bearing, fruit thinning, harvesting, indications of fruit maturity, varieties. practical: Propagation by cuttings, formation of root principles in the stem cuttings, and some of the transactions that take place on the mind.	Theoretical: Live lectures, PowerPoint slides, introductory images, direct dialogues and discussion practical : Assigning practical tasks and reports	Short exams, assignments, discussions
15	2 Theoretical 3 practical	Theoretical A2: The student learns about the most important types of cultivated fruits, methods of	theoretical: A scientific trip to one of the nearby nurseries and a report on the most important	Theoretical: Live lectures, PowerPoint slides, introductory	Short exams, assignments, discussions

		propagation, and the various service operations that take place in the nursery. practical : A scientific visit to one of the fruit orchards or a nearby fruit nursery.	horticultural operations taking place in the nursery. practical: Writing a report on the most important propagated plants and horticultural operations carried out in the nurseryx	images, direct dialogues and discussion practical : Assigning practical tasks and reports	

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%

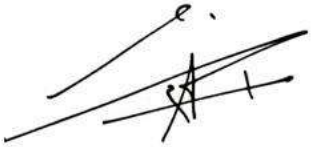
12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Deciduous fruit production (Part 1), authored by Dr. Youssef Hanna Youssef AND Dr. Hassan Al Nuaimi.
Main references (sources)	Deciduous fruit technology (Part 1), written by Prof. Dr. Jassim Mohammed Alwan. 2. Scientific and practical foundations for establishing and servicing orchids Deciduous leaves, written by Prof. Dr. Jassim Mohammad Alwan.
Recommended books and references (scientific journals, reports...)	Horticulture Scince , American Soc.Hort. Sci.
Electronic References, Websites	FAO reports, bulletins and studies



Theoretical lecturer: **practical lecturer** **practical lecturer**

Jassim Mohammed Alwan lecturer: Dr.Yusra Mohammad Saleh Lecturer :Dr .Ahamd Tarik Kalil

Chairman of the Scientific Committee Head of the department

Prof. Dr. Jassim Mohammed Alwan Prof. Dr. Asmaa Muhammad Adel