

Forest nurseries course description

1. Course Name:					
Forest Nurseries					
2. Course Code:					
FONU399					
3. Semester / Year:					
Autumn- First Semester / 2023-2024(Spring semester)					
4. Description Preparation Date:					
1/2/ 2024					
5. Available Attendance Forms:					
Attendance					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 Theory + 3 practical / 3.5 units (75 hours)					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr. Shahla Abd alrazzak basheer/ Theory Email: shahla_abdalrazak@uomosul.edu.iq Mohammed Sameer Idrees/ Practical mohamed.alsawaf@ uomosul .edu.iq					
8. Course Objectives					
Theory :			Practical :		
<ul style="list-style-type: none"> - Developing the student’s ability to deal with scientific and technical means - Developing the student’s ability to deal with the Internet - Developing the student’s ability to deal with multiple media. - Developing the student’s ability to dialogue and discuss Developing the student’s ability to deal economically in the field the job. 			<ul style="list-style-type: none"> -Developing the student’s ability to deal with multiple media. - Developing the student’s ability to dialogue and discuss 		
9. Teaching and Learning Strategies					
Strategy		<ul style="list-style-type: none"> -Interactive lecture, Brainstorming, - Dialogue and discussion, - Assigning tasks and reporting - Assigning group work to reveal leadership skills 			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theory 3 Pract.	Theory: a1: Learn about forest nurseries and the most important terms related to nurseries, tree and seedling, types of nurseries and the purpose of establishing and designing them. Seeds practical : a9: Knows the appropriate time to collect	Theory: Forest Sylviculture science practical : Collect seeds	Interactive lecture, brainstorming, dialogue and discussion, self-learning and reports	Exams, Homework, Reports
2	2Theory 3 Pract	Theory: a2: Learn about seed trees and their types, choosing seed trees, factors that are taken into consideration when	Theory : Seed trees Practical: Seed extraction	Interactive lecture, brainstorming, dialogue discussion,	Exams, Homework, Reports

		<p>establishing and selecting seed trees.</p> <p>practical : a10 Learn about the use of devices used in extracting seeds and how they work</p>		learning and reports	
3	2Theory 3 Pract	<p>Theory: A3: Learn about determining the area of the arboretum and some terms related to seed trees, Plus stands, Normal stands, Minus stands.:</p> <p>practical ; A11 Identify the types of seeds and know the shapes and sizes of some types of forest tree seeds</p>	<p>Theory: Seed tree area</p> <p>Practical: Seed screening</p>	Interactive lecture, brainstorming, dialogue discussion, learning and reports	Exams, Homework, Reports
4	2Theory 3 Pract	<p>Theory: A5: Learn about seed storage, types of storage, benefits of storage, seed vitality and how to measure vitality. forests</p> <p>practical B2: Applies the process of examining seed viability and seed germination and calculating the germination percentage</p>	<p>Theory: Seed collection</p> <p>Practical: time practical application</p>	Interactive lecture, brainstorming, dialogue discussion, learning and reports	Exams, Homework, Reports
5	2Theory 3 Pract	<p>Theory: A6: The student understands the meaning of vegetative propagation and methods of vegetative propagation</p> <p>practical : b3 Apply treatments to seeds before planting to break seed dormancy and improve germination</p>	<p>Theory: Store seeds</p> <p>Practical Seed germination</p>	Interactive lecture, brainstorming, dialogue discussion, learning and reports	Exams, Homework, Reports
6	2Theory 3 Pract	<p>Theory: A7: Distinguish the time of collecting the seeds and the methods of using growth regulators for the cutting with sand</p> <p>Practical : C3: He fills planting bags and agricultural pots</p>	<p>Theory: Dormancy in seeds</p> <p>Practical: Seed treatment before planting</p>	Interactive lecture, brainstorming, dialogue discussion, learning and reports	Exams, Homework, Reports
7	2Theory 3 Pract	<p>Theory: B1: Distinguishes the physiological maturity times of some types of forest trees, and the appropriate time to collect seeds:</p> <p>practical : A12: Explains the process of planting seeds in the nursery</p>	<p>Theory:Vegetative propagation</p> <p>Practical : Practical application in the nursery</p>	Interactive lecture, brainstorming, dialogue discussion, learning and reports	Exams, Homework, Reports
8	2Theory 3 Pract	<p>Theory: C1: Explains how to take plant cuttings, the types of cuttings and their</p>	<p>Theory: Methods of vegetative propagation</p> <p>Practical: Practical</p>	Interactive lecture, brainstorming, dialogue	Exams, Homework, Reports

		sources, and the use of growth hormones to root the cuttings practical :c4 organizes a scientific visit to the nurseries of the Mosul Municipality	application in the nursery	discussion, s learning and reports	
9	2Theory 3 Pract	Theory: A4: Learn about seed storage, types of storage, the benefits of storage, seed vitality, and how to measure vitality practical : C5: Calculates the germination rate, germination energy, germination rate, and germination speed using germination equations	Theory: Time to take cutting and methods Collect nursery Practical: it Practical application in the	Interactive lecture, brainstorm dialogue discussion, s learning and reports	Exams, Homework, Reports
10	2Theory 3 Pract	Theory :A8: Identify the types of living and non-living fences and their specifications practical : b4: Carrying out the process of individualizing the seedlings, taking into account the points that must be taken into account when separating	Theory Fences used Nurseries Practical: Practical application in nursery	Interactive lecture, brainstorm dialogue discussion, s learning and reports	Exams, Homework, Reports
11	2Theory 3 Pract	Theory: d1: Runs discussion panels on developmental processes in the nursery, their importance and types It identifies the most important tillage methods used in the nursery and explains their importance before planting seedlings practical b6: Chemical and organic fertilizers are used for various types of forest tree	Theory: Developmental processes in nursery Practical: practical application	Interactive lecture, brainstorm dialogue discussion, s learning and reports	Exams, Homework, Reports
12	2Theory 3 Pract	Theory: E1: Determines the most important tillage methods used in the nursery and explains their importance before planting Practical: C6: Organizes a scientific visit to the Nineveh Forest Arboretum	Theory: tillage Practical: Methods of propagating forest trees	Interactive lecture, brainstorm dialogue discussion, s learning and reports	Exams, Homework, Reports
13	2Theory 3 Pract	Theory: c2, d1: Distinguishes between maximum and minimum temperatures and the extent of their impact on plant growth. Explains spring	Theory: Irrigation Practical Seed treatment before planting and vitality testing	Interactive lecture, brainstorm dialogue discussion, s learning and reports	Exams, Homework, Reports

		freeze and presents the types of trees that are tolerant to freeze and those that are not tolerant to freeze. The phenomenon of bare freeze. practical : d5: Performs developmental operations in the nursery, pruning and weeding queen			
14	2Theory 3 Pract	Theory: C2: Explains the importance of irrigation in nurseries, irrigation systems used inside the canopy and outside the canopy cuttings practical c7: He collects and cultivates vertical and root	Theory: Fertilization Practical: Developmental processes in the nursery Pot used in agriculture	Interactive lecture, brainstorm dialogue discussion, self-learning and reports	Exams, Homework, Reports
15	2Theory 3 Pract	Theory: C3: Explains the types of fertilizers, fertilization periods, and the extent of the influence of environmental factors on plant fertilization practical : b7: Uses hormones (growth regulators) to root the cuttings	Theory: Pots used in agriculture Practical Planting and dispersing seeds	Interactive lecture, brainstorm dialogue discussion, self-learning and reports	Exams, Homework, Reports

Course Evaluation

	Evaluation Methods	Evaluation Date	Degree	Relative weight %
	Final report theory + pract. Report	Theory 15 weeks Pract. 1-15 week	7 Theory + 6 pract.	% 13
	Short exam (1)	Week (3)	4 Theory + 2 pract.	% 6
	Half exam (theory + pract.)	Week (9)	10 Theory + 5 pract.	% 10
	Short exam (2)	Week (12)	4 Theory + 2 pract.	% 6
	Final exam (practical)	Exam pract.	20	% 20
	Final exam (theory)	Exam theory	40	% 40
			100	% 100

11. Learning and Teaching Resources

Forest nurseries	Prof .Dr. Yavuz Shafiq Abdulla/Adel Al-Kanani

Teacher of Theory : Dr. Shahla Abd alrazzak basheer

Mohammed Sameer Idrees/ Practic

Chairman of the Scientific Committee : Muhammad Younis Al-Allaf

Head of the Dept. of Forestry Sciences:Dr. Muzahim