Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

بسم الله الرحمن الرحيم

University: Diyala
College: Agriculture
Department: Horticulture and Landscape
Stage:2
Lecturer name:Dr. Hiba Ahmed Jawad
Qualification: PhD
Place of work: Horticulture and Landscape

Course Instructor	Dr. Hiba Ahmed Jawad				
E-mail	Hibajawad@uodiyala.edu.iq				
Title	Nurseries and propagation				
Course Coordinator	Spring				
Course Objective	The subject provides information concerning the fundamental principles involved in plant propagation, and server as a manual that describes useful techniques for propagation plants also it provides knowledge of the different plants and various possible methods by certain plants can be propagated				
Course Description	Unit 3.5: 5 hours				
Textbook	Type here the textbook (title,author,edition,publisher,year)				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As(35%)	As(15%)	As(10%)		As(40%)
General Notes	Type here general notes regarding the course				

الاسبوع	التاريخ	المادة النظرية	المادة العملية	الملاحظات
1		. The nursery, the importance of establishing a nursery, the conditions for establishing a nursery, and planning the nursery	**Types of nurseries, division of nurseries**	
2		Sexual propagation (propagation by seeds). Dormancy in the seed, the transactions that end seed dormancy, the changes that occur in the seed and the embryo during dormancy and after the end of dormancy, the advantages and disadvantages of sexual propagation.	Structures used in plant propagation, greenhouses, shades, cold and heated tunnels	
3		Treatments that encourage seed germination, treatments with cold and humidity (cold fertilization), treatments with growth regulators, water treatment, seed growing media, environmental conditions and their effect on seed germination.	Media used in propagation and development of horticultural plants, typ Propagation by seeds, seed production, seed treatments before plantinges of media	
4		Cellular basis of seed propagation	Propagation by seeds, seed production, seed treatments before	

	Seed extraction, planting seeds of some types of fruit and vegetable crops, individualizing and acclimating seedlings	Asexual propagation of plants (vegetative propagation),		**5**
	Semester 1st exam	**Semester 1st exam**		**6**
	Propagation using pens, how to prepare pens	Methods of propagating plants asexually, advantages and disadvantages of asexual propagation, vegetative foundations for asexual propagation of plants, propagation with pens...environmental conditions and their relationship to the success of propagation with pens		**7**
	Treating pens to increase the rooting rate, treating pens with growth regulators,	Physiological and anatomical foundations of vegetative propagation, vegetative lineage, genetic changes that occur in vegetatively propagated plants, bud mutations, chimeras		**8**
	Transplanting, individualizing seedlings, planting seedlings,	Multiplication by specialized parts, multiplication by numbering,		**9**
	Uprooting fruit tree seedlings, how to uproot, timing of	Tubers, crabs, propagules, natural structures suitable		**10**

	uprooting, treatment of seedlings after uprooting	for propagating plants vertically.		
	Propagation by specialized parts, propagation by tubers, propagation by cuttings	Machines and tools used in nurseries		**11**
	Semester 2nd exam	Semester 2nd exam		**12**
	Propagating crabs, how to uproot and separate crabs, growing crabs in a nursery	Studying the most important service operations, such as irrigation and fertilization		**13**
	A visit to some governmental or private nurseries, depending on what is available. A visit to the plant tissue culture laboratory, preparing the media	Micropropagation of plants, propagation by tissue culture		**14**