Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

بسم الله الرحمن الرحيم



University: Diyala College: Agriculture

Department: Science Field Crops

Stage: Fourth

Lecturer name: Husham Abdulwahab Abdulkarem Academic Status: Lecturer

Qualification:ph.D Place of work: College

Agriculture/ University of Diyala

Flow up of implementation celli pass

Course Instructor	Husham Abdulwahab Abdulkarem						
	Gufran Ali Hussien						
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Title	Ecology Stress						
Course Coordinator	Spring Course, autumn course						
Course Objective	Study The effect of Abiotic Stress factors on plant						
Course Description	The effect of Abiotic Stress factors on plant germination, growth, development, and yield						
Textbook	Lectures						
	1- weed science.						
References	2- Websites, Articles, FAO reports.						
	final	report	Coz	Lab			
Course Assessment	%50	%10	%5	%15	%20		
	Monthly tests						
General Notes							

Course weekly Outline

week Date		Topics Covered	Lab. Experiment Assignments	Notes	
		Theoretical	Lab.		
1		Biotic and abiotic stresses	Ecology stress and their risk on the plants experiment		
2		Heat stress	Heat stress and their risk on the plant experiment		
3	Water stress part1		Water stress and calculate the average of seed germination in different water stress treatments		
4		Water stress part2	Water stress and calculate the effect of water stress on seedlings experiment		
5		Salination	Salts stress and their effect on the development plants experiment		
6		Risks of high salination	Evaluation of salination stress on seed germination experiment	Exam	
7		Measurements of salination resistance	Light stress and their effect on plants experiment		
8		Light stress	Differences between high and low light stresses experiment		
9		Low light stress	Effect of light stress on seedlings experiment		
10		High light stress	Effect of So2 contamination on plant experiment		
11		Soil pH	Effect of soil pH on plant experiment		
12		Ecology Contamination	Effect of ecology contamination on plant experiment		
13		Free radicals and role of antioxidants	Effect of free radicals on plant experiment	Exam	
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Instructor Signature Husham Abdulwahab Abdulkarem 2025/1/15 Dean Signature Raaed Ibrahim Khalil