



Course Weekly Outline

Course Instructor	Basem rahem bader				
E_mail	basemrbader@uodiyala.edu.iq				
Title	Soil relationship with water and plants				
Course Number	first				
Credits:	2				
Lectures Hours:	2				
Practical Hours:	Not found				
Course Objective	<p>It aims to introduce students to the relationship of soil with water and plants, a science that seeks to identify and identify the basic concepts of the relationship of soil with water and plants</p> <p>Learn about the salt balance between the soil-plant-atmosphere system and -1 how this affects it</p> <p>.Physiological processes and plant growth -2</p> <p>The different stresses that the plant is exposed to and how to mitigate those -3 .stresses</p> <p>The relationship of organic matter and microorganisms in plant growth -4</p> <p>5- Soil salinity relationship and its effect on plant growth, roots growth and uptake</p>				
Course Description	<p>The article deals with a study To familiarize the student with the concept of the relationship between soil, -1 water and plants</p> <p>The student classifies the different stresses and their effect on plant growth -2</p> <p>The student should separate between physical and chemical properties -3</p> <p>The student analyzes the amount of nutrients in the soil and the preservation of -4 soil from pollution</p> <p>5- The student should understand the relationship of soil salinity and its effect on plant growth, roots, growth and uptake</p>				
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Textbook References	<p>1- The relationship between soil, water and plants</p> <p>1. 1-</p> <p>2. Iraqi academic scientific journals</p> <p>3. Soil Science Society Of America</p> <p>4. Library Genesis</p>				
Course Assessment	Term Test	Laboratory	Quizzes	Project	Final Exam
	40%	10%	10%	40%	60%

General Notes

University: Diyala
College: Agriculture
Department: Soil Science and Water Resources
Stage: Thrid
Lecturer name: basem rahem bader
Academic Status: prof
Qualification: : ph.d
Place of work: Coll.of Agriculture

Republic of Iraq
The Ministry of Higher Education
& Scientific Research



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week	Date	Topics Covered	Practical Part
1	2022/2/20	Water properties and functions Physical properties of soil and their impact on plant growth	Training students to compare the growth and development of root systems in soils of different .textures
2	2 /27	Soil chemical properties and their effect on plant growth	An experiment to find out the effect of tissue on plant growth and root development
3	3 / 6	Soil chemical properties and their effect on plant growth and the relationship of water	Take measurements for the experiment
4	3 /13	content to soil water potential Water and water potential in the soil-plant-air system	Writing the report and discussing the results
5	3/ 20	Water and water potential in the soil-plant-air system and the use of mathematical models	The effect of bulk density on root growth and development (soil compaction)
6	3/ 27	Various stresses to which the plant is exposed and stress relief	Knowledge experiment The effect of compaction on plant growth and root development
7	4 / 3	Soil preparation and plant cultivation	Soil preparation and plant cultivation

8	4 / 10	The relationship of organic matter and soil microbiota to plant growth	- Taking forms and measurements
9	4/ 17	Salinity and its effect on plant growth Root growth and function	Writing the report and discussing the results
10	4/24	Water use efficiency by plants and the influencing factors	The effect of salts on the development of the root system and the absorption of ions
11	5 / 1	Physical properties and their relationship to plant growth	Soil preparation and plant cultivation
12	5 / 8	Fertility properties and their relationship to plant growth	Taking forms and measurements
13	5 /15	The movement of water from the soil to the plant	Writing the report and discussing the results
14	5 / 22	Dissolved ions and their relationship to soil and plants	Measure the daily transpiration rate of different plants
15	5/29	Growth regulators and their relationship to plant growth	Compare and discuss results



Instructor Signature:

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