Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

بسم الله الرحمن الرحيم

University:Diyala
College:Agriculture
Department:Soil Sciences and Water Resources
Stage: third
Lecturer name:Dr. Ibraheem Ahmad. Hedras
Qualification:PhD
Place of work: Coll. Of Agriculture

Flow up of implementation celli pass play

Course Instructor	Ibraheem Ahmad Hedras				
E-mail	ibraheeahmad@uodiyala.edu.iq				
Title	Soil Physics				
Course Coordinator	The first				
Course Objective	1- The student will not know the components of soil 2- The student should know the estimation of soil conductivity 3- To know the specific surface area of the soil				
Course Description	1- The student separates the types of textiles 2- Estimating the physical characteristics of the soil 3- Knowledge of pore sizes between different types of soil				
Textbook	1. Basics of soil physics. Written by Hillel, Daniel. Translated by Dr. Mahdi Ibrahim Odeh. 1990.Fundamental of soil physics. D. Hillel. 1980. 2. Principles of Soil Physics. Lal ana Shukla. 2004. USA. 3. Environment of Soil Physics. D. Hillel. 2004. USA.				
External	1- Fundamental of soil physics. D. Hillel. 1980. 2- Principles of Soil Physics. Lal ana Shukla. 2004. USA. 3- Environment of Soil Physics. D. Hillel. 2004. USA.				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	(20%)	(15%)	(5%)		(60%)
General Notes					

Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

بسم الله الرحمن الرحيم

University:Diyala
College:Agriculture
Department:Soil Sciences and Water Resources
Stage: third
Lecturer name:Dr. Ibraheem Ahmad. Hedras
Qualification:PhD
Place of work: Coll. Of Agriculture

Teaching plan form for the subject

Notes	Practical material	Theoretical material	the date	the week
	The effect of different soil textures on water retention and methods for expressing and measuring soil water content	Introduction and definition of soil science, the location of soil physics in it, and some related relationships		1
	Analysis of soil particle sizes using sieves, hydrometers and pipettes	Soil texture and particle size distribution: methods for finding particle sizes, texture triangle, Stokes' law		2
	Analysis of soil particle sizes using sieves, hydrometers and pipettes	The specific area of soil and methods for determining it physically and chemically		3
	Analyzing the sizes of soil aggregates and estimating their stability using the wet sieving method	Soil construction: its definition, importance, and how to study it		4
	Analyzing the sizes of soil aggregates and estimating their stability using the wet sieving method	Methods of studying soil construction and evidence of soil construction		5
	Measuring the apparent and actual soil density and calculating the total porosity	Stability of soil aggregates, methods of studying them, and factors affecting the formation of aggregates		6
	Estimating the moisture description curve for soils of different textures	Soil water and general water properties		7
	Estimating the moisture description curve for soils of different textures	Properties of water related to porous media ((soil		8
	Estimating the moisture description curve for soils of different textures	Soil water energy and methods of expressing and measuring it		9
	Estimating the moisture description curve for soils of different textures	Water flow in saturated soil		10
	Estimating the moisture description curve for soils of different textures	Water flow in unsaturated soils		11
	Estimating the moisture description curve for soils of different textures	Water flow in the soil: methods for measuring it and equations		12
	Estimating the moisture description curve for soils of different textures	Soil air, air capacity and gas exchange in soil		13
	Estimating the moisture description curve for soils of different textures	Soil temperature, soil temperature, and heat flow in the soil		14
	Estimating the moisture description curve for soils of different textures	Soil temperature, soil temperature, and heat flow in the soil		15

Instructor's signature
Dr. Ibraheem Ahmad Hedras
15 / 1 / 2025

Dean's signature
Prof.Dr.Raaed Ibrahim Khalil
15 / 1 / 2025