

Republic of Iraq

The Ministry Of Higher
Education

& Scientific Research

بسم الله الرحمن الرحيم



University: Diyala
College: Agriculture
Department: Field of Crops
Stage: First
Lecturer name: Dr hussein
aziz mohammed
Qualification: Ph.D.
Place of work: Coll. of Agricultre

Flow up of implementation celli pass play

Course Instructor	Prof. Dr. hussein aziz mohammed				
E-mail	Husseinaziz@uodiyala.edu.iq				
Title	Principles of Soil Science				
Course Coordinator	First				
Course Objective	Introducing students to the basics of soil science according to the vocabulary of the principles of soil science curriculum for students of the second stage at the Department of Soil and Water Resources.				
Course Description	The curriculum vocabulary included: soil science definition, Soil formation and development, processes and factors controlling soil formation and development, physical characteristics of soils, chemical and biological characteristics of soils, soil salinity and alkalinity, and identification of basic nutritional elements and their importance to plants.				
Textbook	1- Principles Soil Science. Dr. Abdullah Al-Ani .University of Baghdad.				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	20%	15%	5%	10%	50%
General Notes					

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week	Date	Topics Covered	Practical Part
1	1 st week	Definition Soil – soil formation and development	Soil sampling process
2	2 nd week	Soil formation factors and processes	Soil samples preparing for laboratory studies
3	3 rd week	Soil profile	Soil moisture determination
4	4 th week	Physical characteristics of soil: particle size distribution	Soil particle size distribution and mechanical analysis
5	5 th week	Soil structure – porosity – True and bulk density	
6	6 th week	Soil erosion – soil color – soil air – soil temperature	True and bulk density determination
7	7 th week	Soil water – moisture content – holding water energy – water movement in soil	Soil paste: preparation and calculating saturation percent
8	8 th week	Soil colloidal and chemical characteristics of soil: soil mineralogy	Electrical conductivity measurement
9	9 th week	Soil colloidal and chemical characteristics of soil: organic colloids – Cation exchange capacity – Base saturation	Soil-pH measurement
10	10 th week	Soil salinity and alkalinity	Determination of cations in soil water extract
11	11 th week	The osmotic effect of salinity on plant growth and reclamation of salts affected lands	Determination of anions in soil water extract
12	12 th week	Soil biological and biochemical properties: (classification of soil biota)	Carbonate mineral determination
13	13 th week	Carbon/Nitrogen ratio - symbiotic and non-symbiotic fixation of nitrogen in the soil	Soil organic matter determination
14	14 th week	Nutrients and their relationship to plant growth	Total count of soil microbiology
15	15 th week	Soil classification	Soil classification

د. حسين عزيز محمد

Instructor's signature

Prof. Dr. Hussein aziz mohammed

15/1/2025

ر. خالد ابراهيم

Dean's signature

Prof. Dr. Raaed Ibrahim Khalil

15/1/2025