1. Course Name:

Principles of soil science

2. Course Code:

PRSS113

3. Semester / Year: Aumtumn - 2023

First fall semester 2023–2024

4. Description Preparation Date:

1 /9/ 2023

5. Available Attendance Forms: Mandatory attendance

Cuonpuncry

6. Number of Credit Hours (Total) / Number of Units (Total) :

2 theoretical + 3 practical 3.5 units

7. Course administrator's name (mention all, if more than one name)

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8. Course Objectives

Theoretical - Enabling the student to know the composition, origin and development of soil - Introducing the student to the physical, chemica and biological properties of soil - Introducing the student to some soil problems, such as salinity and alkalinity And how to treat it	practical : - Enable the student to learn about collecting soil samples from the field How to prepare it for laboratory analysis and conduct the most important basic analyses For soil

9. Teaching and Learning Strategies

My theory: 1- Knowledge and understanding. 2- Identifying the problem of salinity, the nature its treatment, and methods of living with it. 3- Identify the ionic structure of salts. 4- Identifying the salt phases of soils affected by salinity. 5- The possibility of preparing a salt map for ar affected by salinity in order to develop scient programs for their reclamation. Study.	practical: - Adapting to teamwork to reveal skills. - Assignment of tasks and reports each committee.

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation

		Outcomes	name	method	method
1	2 Theoretical 3 practical	Theoretical The student demonstrates concep Soil science practical : The student identi the soil core	Theoretical Introduction to science concepts the soil practical : Move the soil an collect samples from field	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
2	2 Theoretical 3 practical	Theoretical The student gets to know Soil formation practical : The student gets to know Description of soil section	Theoretical Origin and development of soil practical : Description of soil section	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
3	2 Theoretical 3 practical	Theoretical The student learns about the processes soil formation practical: The student identifie tissue the soil	Theoretical Soil formation processes practical : Determine soil texture	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
4	2 Theoretical 3 practical	Theoretical The student explains the properties Soil physical practical : The student measure the degree of interaction the soil	Theoretical Physical properties of soil practical : Estimating degree of interaction	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
5	2 Theoretical 3 practical	My theory: The student learns about construction the soil practical : The student measur ratio	Theoretical Soil building practical : Estimation of calcium carbona in the soil	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical :	Short exams, assignmen ts, discussion s

		Carbonates in soil		Assigning task And report.	
6	2 Theoretical 3 practical	Theoretical The student gets to know Soil temperature practical : The student measures a ratio Carbonates and bicarbonates In the soil	Theoretical : soil temperatur practical : Determination of carbonates and bicarbonate In the soil	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignments, discussions
7			First semester exam		
8	2 Theoretical 3 practical	Theoretical The student distinguishes properties Chemical soil practical : The student measures a ratio Sodium and potassium	Theoretical Colloids and properties Chemical soil practical : Determination of sodium and potassium	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignments, discussions
9	2 Theoretical 3 practical	Theoretical The student explains Organic colloids practical : The student measures the material Membership	Theoretical Organic colloids practical : Estimation of soil organic matter	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignments, discussions
10	2 Theoretical 3 practical	Theoretical The student is familia with the properties o soil Biological practical : The student discovers vehicles Humic	Theoretical Soil biological properties practical : Estimation of humic compound In the soil	Theoretical The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignments, discussions
11	2 Theoretical	Theoretical The student learns about the salinity an	Theoretical Salini and alkalinity in the	Theoretical The salib audio	Short exams, assignmen

	3 practical	alkalinity of soil practical : The student determi soil salinity	Soil practical : Estimation of soil salinity	style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	ts, discussion s
12	2 Theoretical 3 practical	Theoretical The student is famili with the effect of salinity on agricultural production practical : The student measure the soil capacity Cationicity	Theoretical The effect of soil salinity on Agricultural Production practical : Estimation of soil cation capacity	My theory: The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
13	2 Theoretical 3 practical	Theoretical Important nutrients In the soil practical : Extracting ready-made elements From the soil	Theoretical Irrigation water classification systems practical : Determination gypsum in soil	My theory: The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
14	2 Theoretical 3 practical	Theoretical The student learns about phosphorus ar potassium in the Soil practical : The student measures phospho in the soil	Theoretical Phosphorus and potassium In the soil practical : Determination phosphorus in soil	My theory: The salib audio style Write on Chalkboard style Direct dialogue practical : Assigning task And report.	Short exams, assignmen ts, discussion s
15			Second semester exam		

11. Course Evaluation

	Evaluation methods	Evaluation date	Grade Relative	weight %
1	Theoretical final report + practical experience reports	Theoretical week 15, practical week 15	7 theoretical + 6 practical	13%

2	Short test (1) Quiz	week (3)	4 theoretical + 2 practical	6%
3	Exam Midterm (theoretical + practical)	week (9)	10 theoretical + 5 practical	15%
4	Short test (2) Quiz	week (12)	4 theoretical + 2 practical	6%
5	Final practical test	A week of practical exams	20	20%
6	Final theoretical test	The week of theoretical exams	40	100%
	the total		100	100%

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Principles of Soil Science, written by Abdullah Al-Ani (1982)
Main references (sources)	Land environmental chemistry, soil chemistry
Recommended books and references (scientific journals, reports…)	Al-Rafidain Agriculture Journal, Soil Science Journal
Electronic References, Websites	

Dr.. Khalid Khaleyf Nazzal

Theoretical subject lecturer

Mr. Asama hsiam fathl

Practical subject lecturer

Dr. Abdul Qader Abash Sabak

Chairman of the Scientific Committee

Dr. Ammar Younis Kashmoula

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