Course Description Form

1. Course Name:
Principles of soil science
2. Course Code:
PRSS113
3. Semester / Year: Aumtumn - 2024
First fall semester 2024–2025
4. Description Preparation Date:
1/9/2024
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)
Name: Dr. Rana Saadallah Aziz Name:M M .Osama Hossam Fadel Name:M.M.Shymiaa Ghanim Dawood

8. Course Objectives	
Theoretical - Enabling the student to know the composition, origin and development of soil - Introducing the student to the physical, chemical 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 areas affected by salinity in order to develop scientific programs for their reclamation. Study.	practical: - Adapting to teamwork to reveal skills. - Assignment of tasks and reports for each committee.
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	a1: The student demonstrates concep Soil science	Introduction to science concepts the soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	B 2 : The student identifies soil core	Move the soil and collect samples from field	Assigning tasks And report.	assignments, discussions
2	2 Theoretical	a2: The student gets to know Soil formation	Origin and development of Soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	a13:The student gets know Description of soil section	Description of soil section	Assigning tasks And report.	assignments, discussions
3	2 Theoretical	c1: Theoretical The student learns about the processes of soil formation	Theoretical Soil formation processe	Theoretical The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	b3: The student identifies a tissue the soil	Determine soil texture	Assigning tasks And report.	assignments, discussions
4	2 Theoretical	a3: The student explains the properties Soil physical	Physical properties of soil	Theoretical The salib audio style Write on	Short exams,

	3 practical	b4: The student measures the degree interaction the soil	Estimating degree of interaction	Chalkboard style Direct dialogue Assigning tasks And report.	assignments, discussions
5	2 Theoretical	a4: The student learn about construction the soil	TSoil building	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	b5: The student measures a ratio Carbonates in soil	Estimation of calcium carbonate in the soil	Assigning tasks And report.	assignments, discussions
6	2 Theoretical	a5:The student gets to know Soil temperature	soil temperature	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	b6:The student measures a ratio Carbonates and bicarbonates In the soil	Determination of carbonates and bicarbonates In the soil	Assigning tasks And report.	assignments, discussions
7			First semester exam		
8	2 Theoretical	a6: The student distinguishes propert Chemical soil	Colloids and properties Chemical soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,

	3 practical	b8:The student measures a ratio Sodium and potassium	Determination of sodium and potassium	Assigning tasks And report.	assignments, discussions
9	2 Theoretical	a7: The student explains Organic colloids	Organic colloids	The salib audio style Write on Chalkboard sty le Direct dialogue	Short exams,
	3 practical	b9:The student measures the material Membership	Estimation of soil organic matter	Assigning tasks And report.	assignments, discussions
10	2 Theoretical	a8: The student is familiar with the properties of soil Biological	TSoil biological properties	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	c3:The student discovers vehicles Humic	Estimation of humic compounds In the soil	Assigning tasks And report.	assignments, discussions
11	2 Theoretical	a9:The student learns about the salinity and alkalinity of soil	Salinity and alkalinity in the Soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	a14: The student determines s salinity	Estimation of soil salinity	Assigning tasks And report.	assignments, discussions
	2 Theoretical	a10:Theoretical The student is familiar with the effect of salinity on agricultural	Theoretical The effect of soil salinity on Agricultural Production	My theory: The salib Audio style Write on Chalkboard style	Short exams, assignments, discussions

12	3 practical	production b10:The student measures the soil capacity Cationicity	Estimation of soil cation capacity	Direct dialogue Assigning tasks And report.	
13	2 Theoretical	A11:Important nutrients In the soil	Irrigation water classification systems	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	C4:Extracting ready-made elements From the soil	Determination gypsum in soil	Assigning tasks And report.	assignments, discussions
14	2 Theoretical	A12: The student learns about phosphorus and potassium in the Soil	Phosphorus and potassium In the soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	B11: The student measures phosphorus in the soil	Determination phosphorus in soil	Assigning tasks And report.	assignments, discussions
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 Dr. Abdullah 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	

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