Course Description Form

1. Course Name:

Soil Science

2. Course Code:

PRSS113

3. Semester / Year:

Second Semester / 2023-2024

4. Description Preparation Date:

1 / 2 / 2024

5. Available Attendance Forms:

Attended

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

2 Theory + 3 practical / 3.5 units

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

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8. Course Objectives

Theory :	Practical :
-Enabling the student to know the composition, origin and development of soils - 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	- 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

Strategy	-Interactive lecture, Brainstorming, - Dialogue and discussion, - Assigning tasks and reporting - Assigning group work to reveal leadership skills

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theory	a1: The student Demonstrates concepts Soil science soil profile	Introduction to science concepts the soil	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports

	2Theory	b2 : the student identifies the soil profile	move the soil and collect samples from field	Assigning task and reports	Exams, Homework, Reports
2	2Theory	a2: The student gets to know soil formation	Origin and development of soil	-Auditory methods, -Style of writing on	Exams, Homework, Reports
	3 Pract	a13: the student gets know description of soil section	description of soil section	Assigning task and reports	Exams, Homework, Reports
3	2Theory	c1: The student learns about the processes of soil formation	Soil formation processes practical : Determine soil texture	Theory : -Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b3: The student identifies a tissue the soil	Determine soil texture	Assigning task and reports	Exams, Homework, Reports
4	2Theory	a3: The student explains the properties soil physical	Physical properties of soil	-Auditory methods,	Exams, Homework, Reports
	3 Pract	b4: The student measures the degree of interaction the soil	Estimating the degree of soil interaction	Assigning task and reports	Exams, Homework, Reports
5	2Theory	a4: The student learns about construction the soil	Soil building	-Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b5: The student measures a ratio carbonates in soil	Estimation of calcium carbonate in the soil	Assigning task and reports	Exams, Homework, Reports
6	2Theory	a5: The student gets to know Soil temperature	soil temperature of soil	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b6: The student measures a ratio	Determination of carbonates and	Assigning task and reports	Exams, Homework,

		carbonates and bicarbonates in the soil	bicarbonates in the soil		Reports
7	2Theory	b1: The student identifies a type of water the soil	Soil water classification	Theory : -Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b7: The student measures the content wet.	Moisture content measurements for soil	Assigning task and reports	Exams, Homework, Reports
8	2Theory	a6: The student distinguishes properties Chemical soil	Colloids and properties Chemical soil	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b8: The student measures a ratio Na and K	Determination of Na and K	Assigning task and reports	Exams, Homework, Reports
9	3 Theor	a7: The student explains organic colloids	Organic colloids	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b9: The student measures the material membership	Estimation of soil organic matter	Assigning task and reports	Exams, Homework, Reports
10	2Theory	a8: The student is familiar with the properties of soil Biological	Soil biological properties	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	c3 : The student discovers vehicles Humic	Estimation of humic compounds in the soil	Assigning task and reports	Exams, Homework, Reports
11	2Theory	Theory: a9: The student learns about the	Theory: Salinity and alkalinity in the soil	Theory : -Auditory methods,	Exams, Homework, Reports

		salinity and alkalinit of soil		-Style of writing on The blackboar -Direct dialogu style	
	3 Pract	a14: The student determines soil salinity	Estimation of soil salinity	Assigning task and reports	Exams, Homework, Reports
12	2Theory	Theory: a10: The student is familiar with the effect of salinity on agricultural production	Theory: The effect of soil salinity on agricultura production	Theory : -Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b10:The student measures the soil capacity cation.	Estimation of soil cation capacity	Assigning task and reports	Exams, Homework, Reports
13	2Theory	a11: The student is familiar with the elements important food	Important nutrients In the soil	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	c4: The student discovers the extract available elements from the soil	Extracting available elements from the soil	Assigning task and reports	Exams, Homework, Reports
14	2Theory	a12: The student learns about phosphorus and potassium in the soil	Phosphorus and Potassium in the soil	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports
	3 Pract	b11: The student measures phosphoru in the soil	Determination of phosphorus in soil	Assigning task and reports	Exams, Homework, Reports
15	2Theory	c2: The student is familiar with the classification of Iraqi soils	Classification of soils in Iraq	-Auditory methods, -Style of writing on The blackboar -Direct dialogu style	Exams, Homework, Reports

	3 Pract	b12 : The student measures microelements	Estimation microelements	Assigning task and reports	Exams, Homework, Reports

11. Course Evaluation

	Evaluation Methods	Evaluation Date	Degree	Relative weight %
	Final report theory + pract. Report	Theory 15 weeks Pract. 1-15 week	7 Theory + 6 pract.	% 13
	Short exam (1)	Week (3)	4 Theory + 2 pract.	% 6
	Half exam (theory + pract.)	Week (9)	10 Theory + 5 pract.	% 15
	Short exam (2)	Week (12)	4 Theory + 2 pract.	% 6
	Final exam (practical)	Exam pract.	20	% 20
	Final exam (theory)	Exam theory	40	% 40
			100	% 100

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Book (Soil Science) Dr. Abduallah Al-Aani
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Book (Environmental chemistry of Soil) and (Soil Chemistry)
Electronic References, Websites	Sposito, G. (2008). The chemistry of soil. Oxf University Press

Instructor of theoritical part

Dr. Qahtan Darwish Essa

Instructor of practical part

Shaimaa Ghanim Dawood ,
Ahmed Sameer Ghanim,
Aliaa Abd-Allateef

Chairman of the scientific committee

Prof. Dr. Moafak mahmood ahmed

Head of the department of Food science

Prof. Dr. Sumaya khalaf badawi