Course Description Form Salinity and soil reclamation

١. course name
Salinity and soil reclamation
٢. Course Code
SALR307
3. Semester / Year
First/ 2025
4. Date of preparation of this description
15-1-2025
5. Available attendance formats
Full-time (theoretical lecture and practical lecture) weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
5hours- 3.5units
7. Course administrator name (if more than one name)
Dr. Louay Daoud Farhan
8. Course Objectives:

Course Objectives:	Study of the spread of salinity in Iraq and the world and its impact on agricultural production - Identifying the sources of salts and their means of transport - Classification and naming of soils affected by salts - The effect of salinity on plant growth - Quality of irrigation water - Controlling salinity and methods of coexistence with it

٩. Teaching and Learning Strategies

Strategy	**- Lecture and participation.** **- Discussion and dialogue.** **- Brainstorming.** **- Writing reports on the topic.** **- Question and answer.**

١٠. Course Structure

Theoretical part

week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Distribution and spread of salinity in Iraq and the world	Salinity and soil reclamation	Lecture explanation and presentation	Exam
2	2	Sources of salt components	Salinity and soil reclamation	Lecture explanation and presentation	Exam
3	2	Means and mechanisms of salt transport	Salinity and soil reclamation	Lecture explanation and presentation	Exam
4	2	Conditions of formation of soils affected by salts and cycles of salt	Salinity and soil reclamation	Lecture explanation and presentation	Exam
5	2	Factors and conditions responsible for the formation and	Salinity and soil reclamation	Lecture explanation and presentation	Exam
6	2		Salinity and	Lecture	Exam

7	2	Chemical and physical properties of salts accumulated	Salinity and soil reclamation	Lecture explanation and presentation	Exam
8	2	Chemical and physical properties of salts accumulated	Salinity and soil reclamation	Lecture explanation and presentation	Exam
9	2	Stages of salt accumulation in the soil and ion exchange in soils affected by	Salinity and soil reclamation	Lecture explanation and presentation	Exam
10	2	Methods of expressing soil salinity	Salinity and soil reclamation	Lecture explanation and presentation	Exam
11	2	Effect of soil salinity on plant growth	Salinity and soil reclamation	Lecture explanation and presentation	Exam
12	2	Indicators used to	Salinity and	Lecture	Exam
13	2	Methods used to increase plant resistance to salinity	Salinity and soil reclamation	Lecture explanation and presentation	Exam
14	2	Quality of irrigation water	Salinity and soil reclamation	Lecture explanation and presentation	Exam
15	2	Control of salinity and methods of coexistence with it	Salinity and soil reclamation	Lecture explanation and presentation	Exam

week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Collection of salt-affected soil sample and preliminary	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
2	3	Salinity measurement methods - saturated	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
3	3	Salinity measurement methods - dilute	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
4	3	Methods of measuring salinity - gravimetric method	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
5	3	Calculating the amount of salts in the soil body	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
6	3	Calculating the amount of salts in the soil body	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
7	3	Effect of the type of salts on the germination of some	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
8	3	Effect of the type of salts on the germination of some	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
9	3	Effect of salt type on germination of some plant seeds	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
10	3	Effect of salinity on plant growth	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and

11	3	Phytomorphic changes in plants due to salinity	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
12	3	Evaluation of irrigation water quality	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
13	3	Irrigation water classification systems: American	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and
14	3	Relationship between Salinity and Sodicity	Salinity and soil reclamation	Watch, talk and discuss	Daily, monthly, final exam and

Course Evaluation	
Exams Daily exams with discussion questions within the lecture Participation level in questions related to the study material	
12. Learning and Teaching Resources	
Required textbooks (methodology, if any)	Soil Salinity - Theoretical and Applied Foundations, Ahmed Haidar Lazbidi, 1989, Ministry of Higher Education and Scientific Research