Course Description Form of Land Reclamation

1. Course Name:	
Land Reclamation	
2. Course Code:	
LANR415	
3. Semester / Year:	
Second semester/ 2024-2025	
4. Description Preparation Date:	
15/1/2025	
5. Available Attendance Forms:	
Full time (theoretical lecture and practical lecture) weekly	
6. Number of Credit Hours (Total) / Number of Units (Total)	
5 hours (2 hours theoretical and 3 hours practical per week) for 14 weeks, number of units 3.5 units	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: Prof. Dr. Raad Abdel-Kareem Himdan Email : raadaltamimi@uodiyala.edu.iq	
8. Course Objectives	
Course Objectives: Graduating students who are able to:	1 It search in the concept of the land reclamation processes and its importance. 2 The student's should now the scientific foundation on which land reclamation depends. 3 The student will learn the different methods in reclamation of salt affected soils. 4 Teach who to reclaim sandy and desert soils. 5 Knowledge of methods to reclaim calcareous, gypsiferous, acid and water logged soils.
9. Teaching and Learning Strategies	
Strategy	In-person lectures for 14 weeks, including two monthly exams, daily exams, and scientific reports

10. Course Structure					
Theoretical part					
Week	**Hours**	**Required learning outcomes**	**Unit or Subject N**	**Learning Method**	**Evaluation Method**
1	**2**	Introduction: Land reclamation, its concept & importance	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
2	**2**	Preliminary investigations: Environmental and topographical	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
3	**2**	Initial investigation: Surveys, soil tests, & map preparation	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
4	**2**	A , leveling, amount of drainage water and appropriate drainage system	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
5	**2**	Processes and efficiency of salt leaching methods	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
6	**2**	Semester 1st exam			
7	**2**	Use of saline water in leaching	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
8	**2**	Farming: conditions and consideration- management of reclaimed lands, salinity return problems	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
9	**2**	Sodic soils & their general characteristics: methods & means of reclaiming sodic soils	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
10	**2**	Use of: deep plowing, saline water, selection of crops for cultivation	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
11	**2**	Reclamation of calcareous and gypsiferous soils	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
12	**2**	Semester 2nd exam			
13	**2**	Reclamation of sandy and desert soils	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports
14	**2**	Reclamation of acidic and waterlogged soils	**Land Reclamation**	**Lecture Dialogue & discussion Brainstorming**	Daily, monthly and final exams and daily reports

Practical part					
Week	**Hours**	**Required learning outcomes**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**
1	**3**	Conducting a pot experiment for sowing saline soil	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
2	**3**	Conducting a pot experiment for sowing saline soil	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
3	**3**	Preparing a soil column to carry out a washing experiment	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
4	**3**	Preparing a soil column to carry out a washing experiment	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
5	**3**	Experiment for leaching saline soil with different methods	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
6	**3**	Semester 1st exam			
7	**3**	EC & pH determination in soil leachates	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
8	**3**	Cations & anions determination in soil leachates	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
9	**3**	Cations & anions determination in soil leachates	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
10	**3**	Drawing and discussion leaching curves	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
11	**3**	Iraqi soil resistance against sodification	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
12	**3**	Semester 2nd exam			
13	**3**	Reclamation of gypsiferous & calcareous soil experiment	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports
14	**3**	Reclamation of sandy soils	**Land Reclamation**	**Observation Dialogue & discussion**	Daily, monthly and final exams and daily reports

11. Course Evaluation

Examination Monthly & daily exams with discussion questions inside the lecture.
The degree of participation in the questions related to the subject.

12. Learning and Teaching Sources

Required Textbooks (Curricular Books, If Any)	1. Al-Zubaidi, Ahmed Hyder, 1992, Land Reclamation- Theoretical & practical principles, Ministry for Higher Education & Scientific Research, Univ. of Baghdad.
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	Iraqi academic journal
Electronic References, Websites	**www.noor-book.com.** **www.youtube.com.**