

Course Description of Soil & Water Conservation

1. Course Name:	
Soil & Water Conservation	
2. Course Code:	
SOWC402	
3. Semester / Year:	
First 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)	
Prof.Dr. Hassan Hadi Mustafa hassanalalawy@uodiyala.edu.iq	
8. Course Objectives	
Course Objectives: Graduating students who are able to:	1 -Knowledge of ways to control soil erosion 2 -The ability to control water erosion 3- Create windbreaks to control erosion
9. Teaching and Learning Strategies	

Strategy	In-person lectures for 14 weeks, including two monthly exams, daily exams, and scientific reports
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10. Course Structure

Theoretical part

Week	Hours	Required learning	Unit or Subject	Learning Method	Evaluation Method
1	2	Introduction to soil and water conservation	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
2	2	The fallen one	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
3	2	Al-Sih	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
4	2	Water erosion	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
5	2	Controlling water erosion	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
6	2	Controlling water erosion	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
7	2	Controlling water erosion	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
8	2	Wind erosion	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
9	2	Controlling wind erosion	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
10	2	Grassy water channels	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
11	2	Terraces	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
12	2	Temporary and permanent	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports

		maintenance designs			
13	2	Small earth dams and water reservoirs	Soil & Water Conservation	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily reports
14	2	Planning the soil and water management system	Soil & Water Conservation	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	Visit a weather station to learn about rain measuring methods	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
2	3	Rain data analysis	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
3	3	Calculating the maximum flow rate and using the basic water relations device	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
4	3	Design a field experiment to estimate water erosion	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
5	3	Applications based on the general equation for soil losses	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
6	3	Calculating the general equation factors for soil losses in	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports

		the field and choosing the appropriate method for soil maintenance in the field			
7	3	Watching explanations of water erosion and ways to control it by undertaking a scientific trip or showing films	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
8	3	Estimating the amounts of wind erosion in the field using the general equation for wind erosion	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
9	3	Estimating the susceptibility of some soils to wind erosion using a wind tunnel	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
10	3	Conducting designs for grassed water channels	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
11	3	Conducting terrace designs	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
12	3	Applications to temporary and permanent maintenance designs using	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports

		illustrative methods			
13	3	Applications on small earth dams and water reservoirs using illustrative methods	Soil & Water Conservation	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
14	3	Field observations on soil and water management procedures	Soil & Water Conservation	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-Altayef, Nabil Ibrahim 1991. Soil and water conservation. Ministry of Higher Education and Scientific Research, University of Baghdad 2-Ismail, Laith Khalil, 1985. Soil Conservation. Ministry of Higher Education and Scientific Research. University of Mosul. Nineveh. Translator.
Main References (Sources)	3-Al-Ani, Abdel Fattah Abdullah, 1987. Soil Conservation. Ministry of Higher Education and Scientific Research. Technical Institutes Foundation. Baghdad . 4-Fahd, Ali Abd. 1984. Soil and Water Conservation Engineering. Ministry of Higher Education and
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	