Course Description Form

1. Course Name:
Irrigation systems technologies
2. Course Code:
AGSW24_F4061
3. Semester / Year:
First semester / 2024 -2025
4. Description Preparation Date:
1 \ 2 \ 2025
5. Available Attendance Forms:
presence
6. Number of Credit Hours (Total) / Number of Units (Total)
2 Theoretical 3 practical/ 3.5 unite
7. Course administrator's name (mention all, if more than one name)
Name: mooatasim daood S.Agha Email: mooatasim@uomosul.edu.iq
8. Course Objectives

- The student will be able to identify the factors involved in selecting an irrigation method. - The student will be able to identify the factors associated v irrigation water. - The student will be able to understand surface irrigation methods. - The student will be able to calculate the amount of irriga water added.	- The student will be able to identify the type irrigation methods - The student is able to identify the components traceability of the irrigation network - The student can follow and see the irrigation fac - The student will be able to identify the form surface irrigation. - The student is able to understand and observe method of sprinkler irrigation - The student is able to understand and follow the irrigation method.

9. Teaching and Learning Strategies	
- Interactive lectures - Brainstorming - Dialogue and discussion - Assigning tasks and reporting	practical: - Assigning group work to reveal leadership skills - Assigning tasks and reports

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical 3 practical	Theoretical Factors for choos the appropr irrigation method Practical: a1 student understa different irrigation meth traditional methods modern methods	Theoretical 1 The student understa how to choose the appropriate irrigation method. Practical Different ways of ad water	theory: Blackboard with fi observations practical : Using the blackb and field observatio	Short exams, assignments, discussions
2	2 Theoretical 3 practical	a2 The student understa the irrigation w factors related t the choice of irrigation meth practical : a2The student understa what the unit consists of crops, the farm, and the	theory: Irrigation method factor related to irrigation wat practical : Irrigation unit	theory: Blackboard and observations practical : Using the blackb and field observati	Short ex assignments, discussions
3	2 Theoretical 3 practical	Theory: a3 The student understar the forms and methods o surface irrigation. Practical: a3The student is fam with the forms of sur irrigation, and what is h irrigation	theory: Surface irrigatio practical : basin irrigation	theory: Watching videos explanations on board practical : Using the blackb and field observati	Shortexams, assignments, discussions
4	2 Theoretical 3 practical	Theory: b1 The student understa the forms and advantage flood irrigation. practical : b1 It enables the studer understand and estimate depth and volume of w added to the basin	theory Flood irrigation practical : Irrigation terraces, free flooding, and the studer estimation of the depth irrigation water using t basin method	theory: Using the whiteboard while watching YouTube Practical: Use the blackboar and assign reports	
5	2 Theoretical 3 practical	Theory: a4 The student understa what basin irrigation is, advantages and limitatio	Theoretical: Basin irrigation and its advantages	Theoretical: Watch posters practical :	

		Practical: a4 The student understa strip irrigation	Practical: Strip irrigation	Use the whiteboar and watch posters	
6	2 Theoretical 3 practical	Theoretical: B2 The student will be al to understand the feature contour basins practical : b2 The student is able to learn about the advantag and devices of sprinkler irrigation	Theoretical Contour basins practical : Sprinkler irrigation	Theoretical: View a poster using board practical : Field views and pos	
7	2 Theoretical 3 practical	Theoretical: d1 The student understar the estimation of water concentration within the d1 practical : The student is able estimate the drai required for a sprii irrigation system	Theoretical: Estimating the rate of s infiltration of water practical : Sprinkler irrigation sy capacity	Theoretical: Performing calculations reports Practical: Examples blackboard assign and report	First examination
8	2 Theoretical 3 practical	theory: d2 The student underst what free irrigation is what its advantages are. Practical: d2 The student is abl know the sprinkler disch and irrigation time	theory: Flood irrigation practical : Single spray capacity	Theoretical: Scenes of some pos Practical: Examples blackboard assign and report	
9	2 Theoretical 3 practical	Theoretical: d3 Enable the student to apply certain ratios to determine irrigation time and the volume of water added. practical : d3 The student will be al estimate sprinkler drai and irrigation systems	Theoretical Estimating the basin irrigation period practical : Capacity of one sprinkle a rectangular field	Theory: Using the board practical : Use the blackboard assign a report	Short exams, homework assignments, discussions
10	2 Theoretical 3 practical	Theoretical: Theory: d4 The student understands what strip irrigation is and its advantages practical :	Theoretical: : Strip irrigation practical : Correlation coefficient	Theoretical: Using the whiteboa with the poster practical : Example solutions field observations	exams, homewor assignments, discussions

		d4 The student is able to estimate the uniformity o water distribution in the field			
11	2 Theoretical 3 practical	Theoretical: d5 The student distingui the stages of strip irrigati practical: d5 The student will be ab estimate the depth of w applied by sprin irrigation	Theoretical: Stages of strip irrigation practical : Applications in correlati coefficient	Theoretical: Illumination using t board practical : Assigning tasks reporting	exams, homework assignments, discussions
12	2 Theoretical 3 practical	Theory: d6 The student be able to design a s irrigation system. Practical: d6 The student is able to calculate the depth of irrigation water and the discharge of the sprinkle nozzle	Theoretical: Designing a strip irriga system Practical: Estimating the percen of losses for sprin irrigation	Theoretical: Using the board practical : Using the whiteb while assigning report	Short exams homework assignments, discussions
13	2 Theoretical 3 practical	Theoretical: b3 The student learns ab the nature of the furrow its features. practical : b3 The student understa the characteristics of irrigation and estimates correlation coefficient	Theoretical: Furrow irrigation practical : Drip irrigation	Theoretical: Using the board practical : Use the whiteboard with field views and assignments	Short exams homework assignments, discussions
14	2 Theoretical 3 practical	Theoretical: b4 The student understar the construction of a drip irrigation system and its advantages. practical: b 4The student is able to understand the shape of water distribution below dripper. Estimating the drainage of the dripper	Theoretical: Drip irregation practical : Theoretical definition o drips	Theoretical: blackboard plannin practical : Assigning tasks reporting	Second examition
15	2 Theoretical 3 practical	Theoretical: . b5 The student understar the advantages of sprinkl irrigation, and what the capacity of the system is. practical :	Theoretical: Spring irrigation practical :	Theoretical: Illustration of a diagram on the boa	Short exams homework assignments, discussions

		b5 The student is able to understand the problem blockages and bottleneck occurring in the drip irrigation network	Types of blockages and bottlenecks in the drip irrigation network	practical : Preparing some chemical solutions the laboratory	

11. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	irrigation and drainage (Prof. Dr. Laith Khalil Ismail)
Main references (sources)	Irrigation, its basics and applications (Dr. Nabil Ibrahim Latif)
Recommended books and references (scientific journals, reports...)	Rafidain Journal of Agricultur
Electronic References, Websites	https://www.iasj.net

Theoretical subject teacher: Mooatasim Daood S . Agha.

practical subject teacher: Mooatasim Daood . Sulayman

Department Head: Khalid Anwar khalid

Chairman of the Scientific Committee: Abdel Qader Abash Sabak