Department of Soil and Water

College of Agricultural Engineering Sciences

University of Salahaddin

Subject: Principles of Irrigation

Course Book – *(2023 -2024)*

Lecturer's name BSc: Ismael O. Ismael

Academic Year: 2023/2024

Course Book

1. Course name	**Principles of Irrigation System**
2. Lecturer in charge	
3. Department/ College	**Soil and Water Dept/ College of Agricultural Engineering Sciences**
4. Contact	**e-mail: Ismael.ismael@su.edu.krd** **Tel: +964 7512326160**
5. Time (in hours) per week	**Practical: 3**
6. Office hours	Sunday - 9:30 am – 1:00 pm , Thursday 9:00 am – 12:30 pm
7. Course code	**SW315**
8. Teacher's academic profile	**I am a Lecturer of Irrigation systems and principles of Irrigation in the soil and water Department/ College of Agriculture Engineering Sciences, Salahaddin University-Erbil, Kurdistan Region, Iraq. I got a Master's degree in Irrigation systems at Salahaddin University in 2020.**
9. Keywords	**Irrigation, texture, discharge and principles**

10. Course overview:

This course is a theoretical and practical introduction to understanding the base of principles of irrigation systems and different types of water in the soil. In theory more focused on the knowledge of the principles of irrigation and the theoretical idea of irrigation finally discussing the principal skills of irrigation.

In practice, develop student skills in the application of theoretical subjects in the laboratory to better understand and depend on visuals and practice by themselves. English is the preferred language, with some notes and a brief description of Kurdish.

11. Course objective:

This course prepares students to combine knowledge, skills, and attitude about irrigation principles. This course's pedagogical methods and assessment tools are explained in the content table using colorful legends for the teaching methods and assessment of different assignments.

12. Student's obligation

- Students should come to the lecture on time, if you are late, ask for permission and come in quietly.
- Try not to leave the class without a good reason, if you need it, leave quietly after permission.
- Students should come to the lab on time with laboratory requirements.
- Mobile phones should be turned off during lecture time.
- Participate in all exams as scheduled by the department.
- All assessments must be completed and submitted by the deadline.
- Students should avoid cheating and copying the texts because submitted documents will be plagiarism-checked.

13. Forms of teaching

Different forms of teaching will be used to reach the objectives of the course: power point presentations for the head titles and definitions and white bord for solve mathematical equation. Also, Using class rom activity for students and we have a short scientific trip.

14. Assessment scheme

I will give two examinations before the final one. However we have Class activity 5%, Presentation 10%, Homework 10%, Quiz 5%, Field trip 10%, Midterm exam 25% and Final exam 35%

15. Student learning outcome:

By the End of this module, students will be able to:

ʼ Summarize the main principles of irrigation systems.

ʼ Classify the different types of water in the soil and solve the time needed to increase the plants' water.

ʼ Teach how to calculate the Evapotranspiration and Discharge of the water.

ʼ Get a general view of different types of irrigation systems.

16. Course Reading List and References:

1. Burton, M., 2010. Irrigation management: Principles and practices. Cabi.

2. Israelsen, O.W. and Wiley, J., 1950. Irrigation principles and practices (Vol. 70, No. 6, p. 479). LWW.

3. Srinivasan, M.S., Bewsell, D., Jongmans, C. and Elley, G., 2017. Just-in-case to justified irrigation: Applying co-innovation principles to irrigation water management. Outlook on Agriculture, 46(2), pp.138-145.

4. Karmeli, D. and Peri, G., 1974. Basic principles of pulse irrigation. Journal of the irrigation and drainage division, 100(3), pp.309-319.

5. Majumdar, D.K., 2001. Irrigation water management: principles and practice. PHI Learning Pvt. Ltd..

17. The Topics:	Lecturer's name
In this section the lecturer shall write titles of all topics he/she is going to give during the term. This also includes a brief description of the objectives of each topic, date and time of the lecture Each term should include not less than 16 weeks	
18. Practical Topics (If there is any)	

Salahaddin University – Erbil
College of Agricultural Engineering Sciences / Soil & Water DepartmentAcademic Calendar

Module Name	Principles of Irrigation System	
Module Code	SW315	

Fall Semester From (1 Oct 2022) to (20 Jan 2022)

Date	weeks	Module Name and Code	Workload lecture (hr)
6-Sep-22	Week 1	What is the Priciples of Irrigation system	5
13-Sep-22	Week 2 #	Soil texture	5
20-Sep-22	Week 3	Soil Structure (Flipped Learning)	5
27-Sep-22	Week 4 *	Porosity	5
4-Oct-22	Week 5	Classification of soil water (Flipped Learning)	5
11-Oct-22	Week 6 *	Infiltration	5
18-Oct-22	Week 7	Midterm exam	6
25-Oct-22	Week 8 #	Discharge	5
1-Nov-22	Week 9	Measurement Water Discharge by Volumetric and in Channel or Rivers	5
8-Nov-22	Week 10	short trip to Grat Zaab for calculate Discharge of this river	5
15-Nov-22	Week 11 *	Water holding parameters	5
22-Nov-22	Week 12 @	presentation	5
8-Dec-22	Week 13 #	Evapotranspiration (ET) and the Factors that Affect ET Rates	5
15-Dec-22	Week 14	Types of Irrigation Systems(Flipped Learning)	5
16-Dec-22	Week 15	Final Examination	10
22-Dec-22	Week 16		

Week *	Quiz		3
Week #	Assignment		3
Week @	presentation		1

19. Examinations:

1. Compositional: In this type of exam the questions usually starts with Explain how, What are the reasons for…?, Why…?, How….?
With their typical answers
Examples should be provided

2. True or false type of exams:

In this type of exam a short sentence about a specific subject will be provided, and then students will comment on the trueness or falseness of this particular sentence. Examples should be provided

3. Multiple choices:
In this type of exam there will be a number of phrases next or below a statement, students will match the correct phrase. Examples should be provided.

20. Extra notes:

Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.

21. Peer review پێداچوونەوەی هاوەڵ

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