Course Description Form

1. Course Name: Water Resources Engineering
2. Course Code: CIV0325
3. Semester / Year: second semester/2025
4. Description Preparation Date: 3/09/2025
5. Available Attendance Forms: Bologna system attendance form
6. Number of Credit Hours (Total) / Number of Units (Total): SSWL 92 + USSWL 33; ECTS 5
7. Course administrator's name (mention all, if more than one name)
Name: Zainab Naeem Ghazi Name: Athraa Abdulwahid khalaf Email: zainab.naeem@uowa.edu.iq Email: athraa.abdulwahid@uowa.edu.iq
8. Course Objectives

Course Objectives	1. To develop problem solving and understanding of water resources and their importance. 2. To understand the type of water resources and how to maintain them. 3. To understand type and methods of irrigation and their efficiencies. 4. To understand the methods of computing water requirements. 5. To understand the method of surface irrigation. 6. To understand the methods of modern irrigation methods. 7. To design of canals and drain streams. 8. To understand the ground water and how to use it for different purposes.

9. Teaching and Learning Strategies

Strategy	This course offers different teaching and learning strategies. The teaching methodologies are represented by: 1- Lectures where the information is presented throughout power point slides. 2- Oral discussions throughout the classes. Students are encouraged to be involved in these discussions.

	3- Handouts are given to students on monthly-base. 4- Shore review at the beginning of the classes and short summary at the end of the classes. The learning methodologies include: 1- Encouraging students to solve questions in the textbooks. 2- Writing technical reports about different topics.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	1	Introduction in water resources.	Lectures	NA
2	3	1	Soil and water.		
3	3	1	Water requirements.	Lectures	Quizzes
4	3	1	Infiltration of water in the soil	Lectures	and
5	3	1	Types of irrigation.	Lectures	HWs
6	3	1	Sprinkler irrigation.	Lectures	Quizzes
7	3	1	Mid-term,Exam+sprinkler irrigation(continued)	Lectures	and
8	3	1	Drip irrigation.	Lectures	HWs
9	3	1	Pumping unit.		
10	3	1	Irrigation and drainage netwo (open system).	Lectures	
11	3	1	Design of canals.		HW
12	3	1	Design of closed system.	Lectures	Quizzes
13	3	1	Drainage engineering.		and
14	3	1	Design of field drains.		HW
15	3	1	Sustainability of water resources	Lectures	Quizzes
16	3	1	Preparatory week before the fi Exam	Lectures	and
				Lectures	HW
				Lectures	
				Lectures	

11. Course Evaluation

Mid-term exam	10%
HWs	10%
Quizzes	10%
reports	10%
Attendance sheet	10%
Final Exam	50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Asawa, G.L.," Irrigation and Water Resour Engineering", New Age International Publishers, N Delhi,2005
Main references (sources)	Asawa, G.L.," Irrigation and Water Resour Engineering", New Age International Publishers, N Delhi,2005
Recommended books and references (scientific journals, reports…)	Israelson ,O.W. and Hansen V.E. " Irrigation Princip and Practices" John Wiley and sons , Th ed.reprinted1980
Electronic References, Websites	