

Ministry of Higher Education and Scientific Research
Supervision and Scientific Evaluation Authority
Department of Quality Assurance and Academic Accreditation

Academic Program Description Form for Colleges and Institutes Academic Year

University: Shatt Al-Arab
College/Institute: Engineering
Scientific Department: Civil
Date of Form Completion: 01/09/2025



Signature

Name of Head of Department:

Asst. Lecturer Nabeel Najm Abdullah



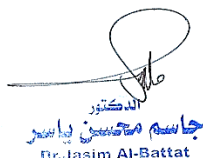
Signature

Name of Scientific Assistant

Dr. Jawad Kadhim

Reviewed by:
Quality Assurance and University Performance Division
Name of Division Director: Dr. Jasem Mohsen Yasser

Signature:



Dr. Jasim Al-Battat



أ.م.د. احسان قاسم محمد
عميد كلية الهندسة

Dean's Approval

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Irrigation Engineering		Module Delivery
Module Type	Core		☐ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	CE315		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level		4	
Administering Department		Type Dept. Code	College
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		Name	e-mail
Scientific Committee Approval Date		1/09/2025	Version Number
			1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Irrigation Engineering		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1. This course covers the basic concepts of irrigation engineering and explains the different irrigation methods. 2. Demonstrate the relationship between irrigation engineering (within agricultural engineering) and civil engineering. 3. Develop skills in understanding and solving problems within the field of agricultural engineering, such as water waste problems. 4. Present the principles and laws taken in other related courses and demonstrate their importance and how to apply and employ them in irrigation engineering to solve potential engineering problems.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Clarifying the basic concepts of irrigation engineering systems and their applications in agricultural fields 2. Acquiring basic skills in managing irrigation systems optimally. 3. Gaining the appropriate experience in designing irrigation systems in different ways and their suitability to different surrounding conditions and knowing the difference between the old and modern irrigation systems. 4. Developing the ability to solve water waste problems and finding the best ways to reduce them. 5. Developing the ability to write scientific reports and reading charts with tables. This course covers a wide range of different irrigation methods, their optimal conditions and design methods with the aim of enriching the knowledge base of the civil engineer in the field of agricultural engineering in a way that enables him to solve potential engineering problems in this field effectively.
Indicative Contents المحتويات الإرشادية	• The main strategy for delivering this module is to encourage student's participation in the exercises while refining and expanding their critical thinking skills. This will be achieved through theoretical lectures, small discussion groups, presentation of scientific films, writing reports, and using the scientific web sites.
	• Direct questions in a manner (how and why) for the subject during the lecture. • short exams during the theoretical lecture. • Midterm exam.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	• The usual theoretical presentation method using the writing board and depending on the style (how and why) of the subject and according to the curriculum of the subject. • The theoretical presentation method using the (data show) device and depending on the method (how and why) of the subject and according to the subject curriculum. • The method of laboratory display using special devices for measuring the different properties of the substance under experiment.
	designed to bring together different concepts from individual examples and homework problems and combine them. My intent in developing exam questions is not to evaluate whether a student can solve a given problem, but to determine whether they understand and can apply the concepts required to solve this problem. After all, the chance that they will face the exact problem in practice is negligible, but the interaction of concepts to solve new problem is vital. As a result, students work is graded with respect to the process used in solving the problem rather than the final answer they will get. A professor should be sensitive to the background and preparation of the students. The way the students are treated has a great influence on the student's performance. I strive to demonstrate to each student my respect for them as individuals and for their contributions to the learning process. Thus, I try to learn every student's name and maintain a high level of classroom interaction. The class atmosphere is very relaxed, so students feel comfortable contributing and asking questions. To further facilitate students learning, I like to provide opportunities for reflection and feedback from students via after-class and office discussions, peer-to-peer feedback on assignments and learning activities and formal and informal evaluations. Students' responses and inputs are very helpful for improving my teaching skills.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ 15 اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	140	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	10
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	60	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3 , 7	All
	Assignments	2	10% (10)	2,4,6,8,10,12	All
	Class activity	1	10% (10)		
	Report	1	10% (10)		
Summative assessment	Midterm Exam	1 hr	10% (10)	10	1-5
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to the Irrigation Engineering
Week 2	Introduction to the Irrigation Engineering
Week 3	Introduction to the Irrigation Engineering
Week 4	Introduction to the Irrigation Engineering
Week 5	Land gradation design
Week 6	Surface irrigation
Week 7	Strip irrigation
Week 8	Furrow irrigation
Week 9	design of beam-columns in braced frames
Week 10	Sprinkler irrigation
Week 11	Sprinkler irrigation
Week 12	Sprinkler irrigation
Week 13	Sprinkler irrigation
Week 14	Trickle irrigation
Week 15	Trickle irrigation
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1. اساسيات الري تأليف جورج هارغريفز وغاري ميركلي 2. مقدمة في نظم الري للدكتور سمير محمد إسماعيل 3. Irrigation and Drainage Engineering by Peter Waller and Muluneh Yitayew 4. Irrigation and water resources engineering by G.L. Asawa	Yes
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.