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 Engineering
Date of Form Completion: 01/09/2025

Signature	**Signature**
Name of Head of Department:	**Name of Scientific Assistant**
Asst. Lecturer Nabeel Najm Abdullah	Dr. Jawad Kadhim

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

Signature:

الدكتور
جاسم محسن ياسر
Dr.Jasim Al-Battat

جامعة شط العرب
كلية الهندسة
العمادة
SHATT AL-ARAB UNIVERSITY

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	**Drainage 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		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor			**e-mail**		
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	1/09/2025		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الاخرى			
Prerequisite module	Drainage Engineering	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الارشادية	
Module Aims أهداف المادة الدراسية	1. Clarify the basic concepts of drainage engineering systems and their applications in agricultural fields. 2. Gain the ability to address the problems of high groundwater levels. 3. Gain basic skills in managing drainage systems and gain experience in designing these systems under different surrounding conditions. 4. Gain experience in the difference between the old and modern drainage system and managing the drainage system optimally.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Ability to design drainage systems in different ways. 2. Ability to think about problems of rising groundwater levels. 3. Writing scientific reports and reading charts and tables. This course covers a wide range of different drainage 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 الارشادية	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.
	• Interacting within the lecture. • Homework and reports. • Short exams (quizzes). • Semester and final exams.

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.

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 Drainage Engineering
Week 2	Introduction to the Drainage Engineering
Week 3	Introduction to the Drainage Engineering
Week 4	Drainage systems
Week 5	Drainage systems
Week 6	Drainage systems
Week 7	Design of drain cross sections
Week 8	Design of drain cross sections
Week 9	Design of drain cross sections
Week 10	Distance between the drains
Week 11	Distance between the drains
Week 12	Distance between the drains
Week 13	Vertical drainage
Week 14	Vertical drainage
Week 15	Vertical drainage
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	كتاب هندسة البزل تأليف الدكتور عبد الستار يونس الدباغ	Yes
Recommended Texts	Irrigation and Drainage Engineering by Peter Waller and Muluneh Yitayew	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.