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: 01/09/2024

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:

الدكتور
جاسم محسن ياسر
Dr.Jasim Al-Battat

Dean's Approval

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Fluid Mechanics II**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☒ **Tutorial** ☒ **Practical** ☒ **Seminar**	
Module Code	**CE214**				
ECTS Credits	**5**				
SWL (hr/sem)	**75**				
Module Level	2		**Semester of Delivery**	1,2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Qasim Mohammed		**e-mail**	E-mail	
Module Leader's Acad. Title	Ass. Lecturer		**Module Leader's Qualification**	M.Sc.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	**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- To develop problem solving skills and understanding of Fluid Mechanics in civil engineering. 2- This course deals with the basic concepts of Fluid Mechanics. 3- This is the basic subject for all electrical and electronic circuits. 4- 4- To understand viscous fluid flow problems.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- To understand general principles of fluid mechanics 2- To understand incompressible and compressible flow 3- To understand flow through pipes and open channel
Indicative Contents المحتوياتالإرشادية	This module covers a wide range of topics of fluid mechanics in order to offer basic knowledge and foundations applicable to various civil engineering problems. This module introduces fundamental of conservation (mass, momentum and energy) laws of fluid flow, potential (ideal) flow, inviscid compressible flow and viscous flow. This module is also complemented by lab classes and tutorials

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, and interactive tutorials.

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ 15 اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	128	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب اسبوعيا	9
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب اسبوعيا	6.46
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	225		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)		
	Assignments	2	10% (10)		
	Projects / Lab.	1	10% (10)		
	Report	1	10% (10)		
Summative assessment	Midterm Exam	2 hr	10% (10)		
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	**Applications of Bernoulli's Equation**
Week 2	**Applications of Bernoulli's Equation**
Week 3	**Applications of Bernoulli's Equation**
Week 4	**Measurement of Flow**
Week 5	**Measurement of Flow**
Week 6	**Momentum equation**
Week 7	**Laminar and turbulent flow**
Week 8	**Laminar and turbulent flow**
Week 9	**Flow through the pipes and the primary and secondary losses in energy**
Week 10	**Flow through the pipes and the primary and secondary losses in energy**
Week 11	**Flow through the pipes and the primary and secondary losses in energy**
Week 12	**Flow through the pipes and the primary and secondary losses in energy**

Week 13	**Flow in open channels**
Week 14	**Flow in open channels**
Week 15	**Flow in open channels**
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Some Physical Properties of Fluids
Week 2	Fluid Pressure at a Point
Week 3	Simple Manometers, Differential Manometers
Week 4	Hydrostatic Forces on Submerged Surfaces
Week 5	Impulse Momentum Equation
Week 6	Types of Resistances and Losses of Energy in Pipes
Week 7	Flow Measuring Devices

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Fluid Mechanics, Streeter	Yes
Recommended Texts	Fluid Mechanics, White, F.M., 2016	No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A** - Excellent	امتاز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	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 (قد 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.