

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: Oil and Gas engineer

Date of Form Completion: 01/09/2025



Signature
Name of Head of Department:

Prof. Dr. Emad Hassan Al-Khersan



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 محمد ياسر البتات
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	Physics		Module Delivery	
Module Type	Core		✓ Theory ✓ Lecture ✓ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	E119			
ECTS Credits	3			
SWL (hr/sem)	45			
Module Level	1	Semester of Delivery	1	
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	E-mail
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date	01/09/2025	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	The course provides general information about physics and its branches, with a focus on the branches that are relevant to the study of civil engineering, such as classical mechanics and the laws and equations of motion. All phenomena in the natural world are measured in terms of a few fundamental relationships between measurable properties of matter and energy. These relationships are called the laws of physics, and they are formulas characterized by a high degree of generality, derived from a vast number of phenomena. The goal of physics can be summarized as expressing these fundamental relationships (these laws) in a mathematical form, enabling the student to use the logical rules of mathematics to apply the laws to specific cases and thus obtain quantitative results. Most physical laws are important in the field of civil engineering, which requires engineers to understand these laws to reflect them in the engineering reality related to mathematics, engineering foundations, fluid motion, hydraulic structures, and others.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Clarifying the basic concepts of physics. 2- Acquiring skills in handling and understanding the laws of physics in a simplified manner. 3- Acquiring the essential skills as an introduction to the physical properties necessary to describe all physical measurements, called dimensions, which are length, mass, time, temperature, electric current, number of particles, and luminous intensity. And deriving other physical quantities such as force, energy, and momentum from these seven basic dimensions. 4- The ability to know and understand the science of physics. 5- The ability to think about solving any problem. 6- Writing scientific reports. 7- The ability to gain experience in dealing with physical quantities.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The course aims to provide basic information about general physics that civil engineering students need in the subjects of static and dynamic mechanics, materials resistance, and fluid mechanics.
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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	2hr	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	Introduction to physics
Week 2	units and dimensions
Week 3	vectors
Week 4	Statics
Week 5	Kinematics
Week 6	Body dynamics
Week 7	Newton's laws of motion
Week 8	Work, energy and power
Week 9	Momentum

Week 10	Rotational motion
Week 11	Harmonic motion
Week 12	Flexibility
Week 13	Fluids
Week 14	The heat
Week 15	The sound
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	University Physics Volume 1 by Samuel J. Ling	Yes
Recommended Texts		No
Websites	https://www.coursera.org/search?query=physics	

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.