

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Physics for Engineering		Module Delivery
Module Type	Basic learning activities		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	PHEN 105		
ECTS Credits	5.00		
SWL (hr/sem)	١٢٥		
Module Level	UGI	Semester of Delivery	One
Administering Department	First stage	College	Civil Engineering
Module Leader	Ammar Mohammed Hamza	e-mail	11495@uotechnology.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	PH.D
Module Tutor	Hala Adnan Abbas	e-mail	Hala.a.abbas@uotechnology.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	Basic knowledge for physical principles that govern physical behaviour in the real world, application of these principles to solve practical problems. General introduction to the fundamentals of experimental related to Civil Engineering
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Enable to identify formulate, solve complex engineering problem by applying principle of physical science. 2- Enable students to communicate with range of audiences (engineering).
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1. Assignments : - There will be a minimum of three sets of assignments during the academic Semester. - The assignments will count 5% of the total course grade. 2. Quizzes: - There will be a two closed books and notes quizzes during the academic Semester. - The quizzes will count 15% of the total course grade. 3. Exams: - There will be two closed books and notes exam during the academic Semester, - The mid-term exam will count 30% of the total course grade. 4. Final Exam: - The final exam will be comprehensive, closed books and notes, - The final exam will count 50% of the total course grade. 5- Lab. - Assignments: There will be There will be weekly Assignments according to experiments. - There will be two exams during the academic Semester,

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy is encouraging students to participation in the lecture, do exercises and give opportunities to improve their skills according to Learning outcomes, Also, increase sense of belonging, for students, and their school community and prepare his work as collaborative team. .
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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	63	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	15min./2	5% (5)	5, 10	LO #1, and ٣
	Assignments	5hr/5	5% (5)	2, 12	LO #1, and ٣
	Projects / Lab.	1	10% (10)	Continuous	LO #1, and ٣
Summative assessment	Midterm Exam	1hr/2	30% (10)	7, 13	LO #1, and ٣
	Final Exam	3hr	50% (50)	16	LO #1, and ٣
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Physical significance of Gradient, Divergence & Curl
Week 2	Physical significance of Gradient, Divergence & Curl
Week 3	Motion- Introduction- Forces – properties of forces
Week 4	Major Forces – Forces Identification
Week 5	Moments
Week 6	Couples
Week 7	Mid Exam 1
Week 8	Motion in One, Two, Three Dimensions
Week 9	Equation of Kinematics - Free Falling
Week 10	Projectile motion – Circular Motion

Week 11	Electricity – Electrical current- Electrical Potential- Electrical Resistance – Ohm's Law
Week 12	Classification of Materials
Week 13	Mid Exam 2
Week 14	Thermal Physics - law of thermodynamics
Week 15	Electromagnetic Waves - Optics & Laser and Molecular Physics- Nanophysics
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	simple pendulum
Week 2	Hooke's law
Week 3	Young's modulus
Week 4	viscosity coefficient
Week 5	viscosity coefficient
Week 6	density Measurement
Week 7	specific gravity

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> Textbook of Engineering Physics, P. S. Aithal and H. J. Ravindra, ACME LEARNING PRIVATE LIMITED 2/8, Ansari Road, Daryaganj, New Delhi-110 002 	Yes
Recommended Texts	<ul style="list-style-type: none"> Fundamentals of Physics by David Halliday, Robert Resnick and Jearl Walker, 2002. 	Yes
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.