MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Engineering mechanics**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	PENG115				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	1		**Semester of Delivery**	Second	
Administering Department	PENG		**College**	ENG	
Module Leader	Muhannad Qasim		**e-mail**	Mohanned@alayen.edu.iq	
Module Leader's Acad. Title	Asst. Lecturer		**Module Leader's Qualification**	Master	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date			**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 و المحتويات االإرشادية	
Module Objectives أهداف المادة الدراسية	1. Introduce the basic principles of force system and equilibrium 2. Introduce the basic principles of truss system and frames 3. Introduce the basic principles centroid and moment of inertia 4. Introduce the basic principles of friction 5. Introduce the basic principles dynamic and motion 6. Introduce the basic principles of stress and strain 7. Introduce the principles of thermal stresses and torsion 8. Introduce the principles of shear force and bending moment 9. Introduce the principles compound stresses
Module Learning Outcomes مخرجات التعلم للمادة االدراسية	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1. understanding the basic principles of force system 2. understanding the basic principles of equilibrium 3. understanding the basic principles of truss system 4. understanding the basic principles centroid 5. understanding the basic principles of moment of inertia 6. understanding the basic principles of friction 7. understanding the basic principles of dynamic system 8. understanding the basic principles of stresses and strain 9. understanding the basic principles of torsion and thermal stresses and compound stresses
Indicative Contents المحتويات االإرشادية	Indicative content includes the following. Weeks 1-2: Introduction to mechanical system (8 hours) Definition and objectives of mechanical systems (2 hours) Historical development and evolution mechanical system (2 hours) Weeks 3-4: force system (12 hours)

Learning and Teaching Strategies استراتيجيات التعلم و التعليم	
Strategies	Direct instruction
	Solving problems

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعياً	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	56	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعياً	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**150**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	5% (5)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	5% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	20% (20)		
	Report	1			
Summative assessment	**Midterm Exam**	2hr	20% (20)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	• Force system1
Week 2	equilibrium
Week 3	• truss
Week 4	• centroid and moment of inertia
Week 5	• friction
Week 6	• dynamic motion
Week 7	• stress and strain
Week 8	• normal stress
Week 9	• shear stress

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Week 10	• thermal stresses
Week 11	• Pressure vessels
Week 12	• torsion
Week 13	• shear force diagram
Week 14	• bending moment diagram
Week 15	• compound stresses
Week 16	**Preparatory week before the final Exam**

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

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Engineering mechanics and strength of material	Yes
Recommended Texts	Engineering mechanics by meriam Strength of material by singer	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 جداً	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.

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