MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer Applications**			**Module Delivery**	
Module Type	**Basic**			☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	**UOMU0000033**				
ECTS Credits	**4**				
SWL (hr/sem)	**100**				
Module Level	**3**		**Semester of Deliver**		**6**
Administering Department	**PM**		**College**	**TEMO**	
Module Leader	**M.Sc Abrar Abdulkareem Saeed**		**e-mail**	**Abrar.Abdulkareem.Saeed@uomus.edu.iq**	
Module Leader's Acad. Title	**Assistant Lecturer**		**Module Leader's Qualification**		**M.Sc**
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	**01/6/2023**		**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 Objectives أهداف المادة الدراسية	1. To develop students' fundamental knowledge for modeling the mechanical different parts in 2D & 3D. 2. To develop students' fundamental knowledge of insight into drawing the

	mechanical different parts in 2D & 3D. 3. To understand the basic principles of simulation and creating mechanical parts systems in 2D & 3D using developed design software. 4. This course deals with the basic concept of mechanical drawing. 5. Identify and describe the icons components of a typical insertion of different mechanical parts into different mechanical structures. 6. To explain different important mechanical parts involved in mechanical systems processes. 7. To develop students' fundamental knowledge of analyzing and calculating the important strength of materials factor that is very significant in manufacturing of designed mechanical parts in 2D & 3D.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Define mechanical parts and identify their applications. 2. Define and calculate mechanical parts using developed design software. 3. Recognize how to use the icons components of a typical insertion of different mechanical parts. 4. Analyze the important strength of materials factor that is very significant in manufacturing of designed mechanical parts in 2D & 3D. 5. Describe the significance of the accurate successful 2D & 3D designation of mechanical parts in the manufacturing. 6. Identify the employing of the successful 2D & 3D designation way of the mechanical parts in the manufacturing.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Define and show significance, of [Fasteners {Nuts, Screws, Washer}; {Shaft generators: Cylinder, Wrench, thread, gear, chamfer and filet}; {Shaft Component: Roller Bearing, (Key: Parallel and Woodruff Key), Seals}; {Drill Bushing: Assembly Drawing}; { Springs: Compression, Extension and Torsion}; {Deflection Line}; {moment of inertia}]. [10 hours] Calculation and analysis of [Fasteners {Nuts, Screws, Washer}; {Shaft generators: Cylinder, Wrench, thread, gear, chamfer and filet}; {Shaft Component: Roller Bearing, (Key: Parallel and Woodruff Key), Seals}; {Drill Bushing: Assembly Drawing}; {Springs: Compression, Extension and Torsion}; {Deflection Line}; {moment of inertia}]. [10 hours] Create, design and inert of [Fasteners {Nuts, Screws, Washer}; {Shaft generators: Cylinder, Wrench, thread, gear, chamfer and fillet}; {Shaft Component: Roller Bearing, (Key: Parallel and Woodruff Key), Seals}; {Drill Bushing: Assembly Drawing}; {Springs: Compression, Extension and Torsion}; {Deflection Line}; {moment of inertia}]. [10 hours]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The Creation, designation and insertion of mechanical parts module employs a range of effective learning and teaching strategies. Students engage in theoretical lectures, practical demonstrations, and hands-on laboratory sessions to grasp the underlying

	principles and gain practical skills. Case studies and real-world scenarios enhance mechanical designing abilities, while group projects foster teamwork and communication skills. Continuous assessment methods, including assignments and practical assessments, ensure students' progress and understanding of the subject matter. The interactively module promotes equipping students with the knowledge and skills necessary for success in the field of designation of mechanical parts.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**100**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	3	15% (15)	3, 9 and14	LO #1,#3 and #5
	Assignments	2	5% (5)	4 and 15	LO #2 and #6
	Projects / Lab.	14	20% (20)	Continuous	All
	Report				
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1, #2 and #3
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Fasteners: - Nuts - Screws

	- Washer
Week 2	Shaft generators
Week 3	Cylinder
Week 4	Wrench
Week 5	Thread
Week 6	Gears
Week 7	Chamfer and Fillet
Week 8	Shaft Component
Week 9	Roller Bearing and Bearing calculations
Week 10	Key: Parallel , Woodruff Key
Week 11	Seals
Week 12	Drill Bushing
Week 13	Assembly Drawing
Week 14	Springs: - Compression - Extension - Torsion
Week 15	Moment of Inertia; Deflection Line
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Fasteners: (Nuts, Screws, Washer)
Week 2	Lab 2: Shaft generators.
Week 3	Lab 3: Cylinder.
Week 4	Lab 4: Wrench.
Week 5	Lab 5: Thread.
Week 6	Lab 6: Gears.
Week 7	Lab 7: Chamfer and Fillet.
Week 8	Lab 8: Shaft Component
Week 9	Lab 9: Roller Bearing and Bearing calculations.
Week 10	Lab 10: Key: Parallel, Woodruff Key.
Week 11	Lab 11: Seals.
Week 12	Lab 12: Drill Bushing
Week 13	Lab 13: Assembly Drawing
Week 14	Lab 14: Springs: Compression, Extension and Torsion
Week 15	Lab 15: Moment of Inertia; Deflection Line

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts		

Recommended Texts		
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.

Module 1

Code	**Course/Module Title**	**ECTS**	**Semester**
PM 302	Computer Applications	4	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
1	3	63	37
Description			
The Computer Applications in this level provides students with a comprehensive fundamental knowledge for modeling the mechanical different parts in 2D & 3D. And make them understanding the definition, significance, calculation, analysis, create, design and inert of [Fasteners {Nuts, Screws, Washer}; {Shaft generators: Cylinder, Wrench, thread, gear, chamfer and fillet}; {Shaft Component: Roller Bearing, (Key: Parallel and Woodruff Key), Seals}; {Drill Bushing: Assembly Drawing}; {Springs: Compression, Extension and Torsion}; {Deflection Line}; {moment of inertia}]. As well as identifying and description the icons components of a typical insertion of different mechanical parts into different mechanical structures. Also enhancing and developing the student's capability for following the right steps in mechanical design and analysis the different mechanical parts into different mechanical structures with simulating the strength of material important parameters for accurate design performing.			