MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	**Mathematics**		**Module Delivery**	
Module Type	**Core learning activity**		☒ Theory ☐ Lecture ☒ Tutorial ☒ Practical ☐ LSeminar	
Module Code				
ECTS Credits	**4**			
SWL (hr/sem)	150			
Module Level	UGI	**Semester of Delivery**		2
Administering Department	EOG	**College**	CIMOG	
Module Leader	**Name: Aleia Hussein**	**e-mail**	**Aleia.h@uowa.edu.iq**	
Module Leader's Acad. Title	Ass. Lec.	**Module Leader's Qualification**		MSc.
Module Tutor	Name (if available)	**e-mail**	E-mail	
Peer Reviewer Name	Name	**e-mail**	E-mail	
Scientific Committee Approval Date	12/12/2025	**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 Objectives	1. Mastering the basic concepts of partial derivatives. 2. Mastering the techniques of specific and undefined calculus. 3. Mastering the second integration. 4. Solving linear equations. 5. Learn the basic parts of the matrices. 6. Understand the inverse of the matrix.
Module Learning Outcomes	**Knowledge and understanding** 1- The student learns the most important basics of mathematics 2- The student learns the concept of partial derivatives. 3- The student learns how to use calculus. 4- The student learns how to solve equations. 5- The student learns about matrices.

	6- The student learns the inverse of the matrix.
Indicative Contents	1- Partial derivatives, single function[6 hours],Multiple function[3hours] 2- Solving algebraic equations with one variable, solving algebraic equations with two variables, solving inequalities [12 hours] 3- Calculating domain and range and graphing functions [9 hours] 4- Basic rules of differentiation, chain rule, implicit differentiation, basic rules of integration [12 hours] 5- Definition of matrix, operations on matrices, inverse of matrix [9 hours] 6- Solving equations using matrices [9 hours]

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	1- Subject-specific skills 2- Theoretical aspect 3- Elasticity of demand and supply

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem)	63	**Structured SWL (h/w)**	4
SWL (h/sem)	4	**SWL (h/w)**	3
Total SWL (h/sem)	**150**		

Module Evaluation				
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
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Formative assessment	**Quizzes**	2	10% (10)	11	All
	Assignments	2	10% (10)	Continuous	All
	Onsit Assignments	2	10% (10)	Continuous	All
	Report	1	10% (10)	13	All
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

	Delivery Plan (Weekly Syllabus)
	Material Covered
Week 1	Partial Derivative
Week 2	Single function and multiple function, the concept of partial differentiation
Week 3	Integration: Definition of integration as an inverse operation of differentiation
Week 4	integration formulas "for the sum of the addition and subtraction of a set of functions.
Week 5	the product of multiplying or dividing two functions.
Week 6	Undefined integration, specific integration
Week 7	Integration of a multi-variable (binary) function
Week 8	Vectors and matrices
Week 9	Definition of vectors and arrays
Week 10	algebraic operations of matrices "addition and subtraction of a single matrix
Week 11	unit matrix, zero matrix, diagonal matrix, matrix determinant
Week 12	Inverse matrix
Week 13	Solving equations using matrices
Week 14	Solving equations using matrices
Week 15	**Preparatory week before the final Exam**

	Delivery Plan (Weekly Lab. Syllabus)
	Material Covered
Week 1	None
Week 2	None
Week 3	None
Week 4	None
Week 5	None
Week 6	None
Week 7	None

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts		Yes
Recommended Texts	Principles of Mathematics / Written by: Dr. Muhammad Al -Qadi and a. Ahmed Abu Bakr	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 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.