

MODULE DESCRIPTION FORM

Module Information			
Module Title	Mathematics		Module Delivery
Module Type	Suport		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture
Module Code	UOWA 1101		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	2
Administering Department	Forensic Evidence	College	College of Sciences
Module Leader	Saja Bassem Ali	e-mail	Saja.b@uowa.edu.iq
Module Leader's Acad. Title	Assistant Lect.	Module Leader's Qualification	Asst. Lect.
Module Tutor	Saja Bassem Ali	e-mail	Saja.b@uowa.edu.iq
Peer Reviewer Name	Shaimaa Hussein Nawfal	e-mail	shaymaa@uowa.edu.iq
Scientific Committee Approval Date	01/03/2026	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	


 أ. شيماء حسين نوافل
 ٢٠٢٦ - ٢٠٢٥




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Department Head Approval

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	<ol style="list-style-type: none">1. Identify the properties of mathematical functions and their opposites.2. Familiarity with the properties of polynomials, exponential and logarithmic functions, trigonometric functions and their opposites.3. Recognize the concept of differential functions and its relationship to speed and the rate of their change with time (acceleration).4. Identify the integration of the functions and methods of Integration.5. Knowledge of applications of integral in geometry.
Module Learning Outcomes	<ol style="list-style-type: none">1. Recognize properties of functions and their inverses;2. Recall and use properties of polynomials, rational functions, exponential, logarithmic, trigonometric and inverse-trigonometric functions;3. Apply the differentiation procedures to solve related rates and extreme value problems;4. To understand the term integration.5. To distinguish between definite and indefinite integration.6. To describe the area and volume by means of integration.

Learning and Teaching Strategies

Strategies	<ul style="list-style-type: none"> • Following up the scientific development of mathematics by reviewing modern curricula. • Follow-up and development of academic courses and compare them with other universities. • Using the latest teaching aids to motivate the student to learn and understand.
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Student Workload (SWL)

Structured SWL (h/sem)	48		3.2
Unstructured SWL (h/sem)	77		5.1
Total SWL (h/sem)	125		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5,10	LO#1,2,10 and 11
	Assignments	2	10% (10)	2,12	LO#3,4,6 and 7
	Projects	2	10%(10)	3,7	
	Report	1	10% (10)	13	LO#5,8, and 10
Summative assessment	Midterm Exam	1 hr	10% (10)	7	LO,#1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Functions, Inverse Functions.
Week 2	Trigonometric Functions, Inverse Trigonometric Functions.
Week 3	Exponential and Logarithmic Functions.
Week 4	Limits and Continuity
Week 5	The Derivative, The Chain Rule.
Week 6	Implicit Differentiation, L'Hopitals Rule.
Week 7	The Derivative in graphing and applications, Relative Extrema.
Week 8	Rolle's Theorem; Mean –Value Theorem
Week 9	The indefinite integral, Areas under a curve
Week 10	The fundamental theorem of integral calculus, Area between two curves
Week 11	The integral of trigonometric functions, the integral of inverse trigonometric
Week 12	The integral of the functions $\log u(x)$, $\ln u(x)$, $e^{u(x)}$ and $a^{u(x)}$
Week 13	Methods of integration , powers of trigonometric functions
Week 14	Integration by parts
Week 15	Volumes
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Thomas & Finney "Calculus and Analytic Geometry" (2005), 11th edition, Addison Wesley.	yes
Recommended Texts	Howard Anton, IrI Bivens & Stephen Davis "Calculus"(2009),9thedition,John Wiley & Sons,NC.	yes
Websites	Various lectures and lecture notes on the internet.	

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.