	Ministry of Higher Education and Scientific Research - Iraq Al-Nahrain University College of Science Computer Science Department	

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Calculus (I)**			**Module Delivery**	
Module Type	**Support**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**CREQ1201**				
ECTS Credits	**4**				
SWL (hr/sem)	**100**				
Module Level	2		**Semester of Delivery**	1	
Administering Department	Mathematics and computer Applications		**College**	Science	
Module Leader	Zeyad Mohammed Abed		**e-mail**	zeyad.mohammed@nahrainuniv.edu.iq	
Module Leader's Acad. Title	Assistant Lecturer		**Module Leader's Qualification**	Master degree	
Module Tutor	Ass.Lec.Wisam Rafid		**e-mail**		
Peer Reviewer Name	Dr Ommer Ismaal		E-mail	**omar.ismael@nahrainuniv.edu.iq**	
Scientific Committee Approval Date	1/9/2025		**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 Aims أهداف المادة الدراسية	The aim of this course is to introduce the concept of limits and derivative, study various techniques of derivatives, then using these concepts in understanding mixed problems of derivatives applications
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After completing the course, students have the ability 1. To determine some special functions. 2. To determine the limits of the function in general. 3. To determine the derivatives of functions in general 4. To compute derivatives involving transcendental functions. 5. To compute inverse trigonometric derivatives. 6. To demonstrate ability to think critically by recognizing the applications of derivativs 7. To demonstrate an intuitive and computational understanding for derivativel applications by solving a variety of problems from physics, engineering and mathematics.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module will be presented to the students through a specified series of lectures, supported by problem solving practice carried out in interactive tutorials. These tutorials will be supported by practice and directed study outside the classroom. Formative assessment takes place throughout the

	module during tutorials and feedback is given during these tutorials.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	67	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.466
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**	1	10% (10)	6, 10	LO #1, 2, and 6
	Assignments	1	10% (10)	7, 12	LO # 3 and 7
	Projects / Lab.	1	10% (10)	continuous	
	Report	1	10% (10)	14	LO # 5, 7 and 8
Summative assessment	**Midterm Exam**	1	10% (10)	5,11	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Limites(basic definition+some examples)
Week 2	Some special types of limite
Week 3	Limits of trigonometric limits
Week 4	Continuous functions and their limits
Week 5	Derivatives (basic theorems)
Week 6	General examples for derivatives
Week 7	Mid-term exam
Week 8	Trigonometric functions and their limits
Week 9	Some applications of derivatives
Week 10	Special functions and their derivatves
Week 11	Mixed problems of derivatives
Week 12	Inverse trigonometric functions
Week 13	Derivatives Inverse of trigonometric functions
Week 14	Mixed Examples
Week 15	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	

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.