MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information		
معلومات المادة الدراسية		

Module Title	**Mathematics II**	Module Delivery
Module Type	**Basic learning activities**	☒Theory ☒Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar
Module Code	**PRE107**	
ECTS Credits	**6**	
SWL (hr/sem)	**150**	

Module Level	1	Semester of Delivery	2
Administering Department	Type Dept. Code	**College**	Type College Code
Module Leader	Ghufran Faris Abdullah alrahhawi	**e-mail**	ghufranalrahhawi@uomosul.edu.iq
Module Leader's Acad. Title	Ass. Lecturer	**Module Leader's Qualification**	Ms.c
		e-mail	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	1/06/2023	**Version Number**	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			

Prerequisite module	Mathematics I	**Semester**	1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	

Module Objectives أهداف المادة الدراسية	The objective of the course is to present Transcendental function ,Application of exponential and logarithimic function ,Hyperbolic Trigonometric function and inverse Hyperbolic Trigonometric function, Methods of integral, Complex numbers and Differential equation.
Module Learning Outcomes	It is expected from the student who passes this module learn the following topics: 1. Transcendental function 2. Application of exponential and logarithimic function

مخرجات التعلم للمادة الدراسية	3. Hyperbolic Trigonometric function and inverse Hyperbolic Trigonometric function 4. Methods of integral. 5. Complex numbers 6. Differential equation
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1. 1. Transcendental function logarithimic function , inverse Trigonometric functions and exponential function with derivative and integral [12 hrs.] 2. Application of exponential and logarithimic function. [4 hrs.] 3. Hyperbolic Trigonometric function and inverse Hyperbolic Trigonometric function with derivative and integral. Methods of integral. [8 hrs.] 4. Methods of integral Integration by part, Integration by Trigonometric subistitutation and completing squares, Integration by partial fractional, Integration involving, Integration by linear root contain 1st degree expressions and Integration by fractional function contains sine and cosine, Integration by odd and even and high power for trigonometric functions. [24 hrs.] 5. Complex numbers. [4 hrs.] 6. Differential equation separation of variables – homogenues equations, linear cofactor – exact equations – integral factor. [8hrs.]

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students The usual theoretical presentation method using the writing board and depending on the method (how and why) of the subject and according to the curriculum of the subject.

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	87	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
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	10% (10)	4 and 14	LO #1, and #13
	Assignments	6	10% (10)	3,5,7,12,13 and 15	LO #1, #2,#3#4,#5and #6
	Projects / Tutorial	1	10% (10)	Continuous	All
	Report				
Summative assessment	**Midterm Exam**	2hr	20% (20)	10	LO #1 - #4
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1-3	Transcendental function: logarithimic function , inverse Trigonometric functions and exponential function with derivative and integral
Week 4	Application of exponential and logarithimic function. **(Quiz1)**
Week 5-6	Hyperbolic Trigonometric function and inverse Hyperbolic Trigonometric function with derivative and integral.
Week 7-12	Methods of integral: Integration by part, Integration by Trigonometric subistitutation and completing squares, Integration by partial fractional, Integration involving, Integration by linear root contain 1st degree expressions and Integration by fractional function contains sine and cosine, Integration by odd and even and high power for trigonometric functions . **(Mid Exam)**
Week 13	Complex numbers.
Week 14	Differential equation: separation of variables – homogenues equations. **(Quiz 2)**
Week 15	Differential equation: linear cofactor – exact equations – integral factor.
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Calculus I By: Thomas	Yes
Recommended Texts	Calculus I By: Thomas 2018	No
Websites	https://www.coursera.org/search?query=Calculus	

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

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.