Course Description Form

1. Course Name:
Mathematic −1

2. Course Code:
MATH131

3. Semester / Year:
First course 2023−2024

4. Description Preparation Date:
1/2/2024

5. Available Attendance Forms:
presence

6. Number of Credit Hours (Total) / Number of Units (Total)
45 hours /3 units

7. Course administrator's name (mention all, if more than one name)
Name: Shamil Mohammed Saleh Hassan
Email: eng.sh.hassn@uomosul.edu.iq

8. Course Objectives

Course Objectives	• The student uses understanding and of the basic concepts of engineering mathematics • So that the student can develop his mental abilities when solving exercises and making connections with information to reach a solution and benefit from it in other transactions.

9. Teaching and Learning Strategies

Strategy	- Interactive lecture - Brainstorming - Dialogue and discussion - Assigning tasks

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation

		Outcomes	name	method	method
1	3 Theoretical	a1: Knowledge Of graphing functions, laws of logarithms, and Asian Function laws	Types of functions (Exponential and logarithmic functions	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
2	3 Theoretical	a2: Knowledge of the laws of triangles and how to solve algebraic functions	Trigonometric Function and algebraic function	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
3	3 Theoretical	a3: Knowledge of Trigonometric facts and Their uses in engineering mathematics	Trigonometric facts, continuation of topic	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
4	3 Theoretical	a4: Know how to find the equation of a line and a slop	Equation of line and slope	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
5	3 Theoretical	a5: Learn about The rules of the derivative and the derivative of algebraic functions	Derivative (Derivative rules and their applications in algebraic functions)	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
6	3 Theoretical	c1: Types of derivatives (algebraic functions)	Solving exercises	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
7	3 Theoretical	a6:Rules for solving the derivative trigonometric functions	Derivative of trigonometric functions	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
8	3	a7:Derivative of	Derivative of	Interactive	Quiz

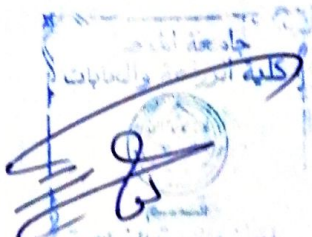|		Theoretical	trigonometric functions	logarithmic functions	lecture, brainstorming, dialogue and discussion, self-learning	discussio
9	3	Theoretical	b1: How to solve the derivative of logarithmic functions	Complement of the derivative of logarithmic functions	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
10	3	Theoretical	a8:Know the rules for solving the derivatives of exponential functions	Derivative of exponential functions	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
11	3	Theoretical	a9:Learn how to Solve higher Order derivatives	Derived from the highest order	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
12	3	Theoretical	c2:Derived from The higher ranks	Derived from the higher ranks	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
13	3	Theoretical	a10:How to find Velocity and acceleration using the derivative	Applications on the derivative(speed And acceleration	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion
14	3	Theoretical	a11:Inflection point	Applications to the derivative the inflection points)	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion

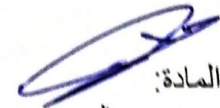| 15	3 Theoretical	b2: Learn how to find the upper and lower inflection points	Complement applications To the derivative (points of inflection)	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quiz discussion

11. Course Evaluation

5% short test
5% short test
15% for the first semester exam
15% second semester exam
Total 40%
Final exam 60%
Final grade 100%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	. Mathematics for the first grades , administration and economics 1980, Dr. Ali Aziz Ali/Assistant Professor of Mathematics, University of Mosul And Dr. Ali Al-Hasswan/Assistant Professor of Mathematics /Al-Mustansiriya University
Main references (sources)	Engineering Mathematics, fourth edition, John Bird
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

مدرس المادة:
م . شامل محمد صالح حسن

رئيس اللجنة العلمية
أ.د.أركان محمد امين صديق

رئيس القسم
أ.م.نوفل عيسى محيميد

4