Course Description Form

1. Course Name:
Mathematic –2

2. Course Code:
MATH132

3. Semester / Year:
second 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 /2 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 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	Unit or	Learning	Evaluation

		Learning Outcomes	subject name	method	method
1	3Theoretical	A12:Knowing the idea of the intarget and the on-specific	Introduction to Definite and indefinite integration	presence	Quiz discussion
2	3Theoretical	A37:Identify the basic rules integration	Integration properties	presence	Quiz discussion
3	3Theoretical	A12: Know rules for solving the integration exponential and logarthmic functions	Integration exponential and logarithmic functions	presence	Quiz discussion
4	3Theoretical	A12:Know th rules for solving integral homogeneous functions	Integration trigonometric functions	presence	Quiz discussion
5	3Theoretical	A12:Know laws of solving inverse integral trigonometric functions	Integration inverse trigonometric function	presence	Quiz discussion
6	3Theoretical	A37:Solve additional problems for types of integrals	Solve problems	presence	Quiz discussion
7	3Theoretical	A12:Knowledg of the integrati rule by algebraic substitution	Integration methods (integration algebraic substitution	presence	Quiz discussion

		and types functions			
8	3Theoretical	A12:Knowledge of the law of integral by parts and application different types functions	Integration by parts	presence	Quiz discussion
9	3Theoretical	A12:Knowing how to conver function partial fractions and how integrate with partial fractions	Integration with partial fractions	presence	Quiz discussion
10	3Theoretical	C21:Integrati with partial fractions	Integration with partial fractions	presence	Quiz discussion
11	3Theoretical	A3:Know how to find the area under the curve by approximate method	Calculate area using approximate method	presence	Quiz discussion
12	3Theoretical	C21: Know h to calculate the area under curve for various functions	Calculate area under curve integration	presence	Quiz discussion
13	3Theoretical	A12:Know h to find the area between the curves	Calculate area between two curves	presence	Quiz discussion
14	3Theoretical	C23:Knowing how to find the volume off rotating body using a pointer and a disc using both coordinates	Calculating volume of a rotating body	presence	Quiz discussion

15	3Theoretical	A37:Knowing the method numerical integration And comparing it to the usual method and various functions	Integration approximate method (numerical integration)	presence	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, Ali Aziz Ali/Assistant Professor Mathematics, University of Mosul And Dr. Ali Al-Hasswan/Assistant Professor of Mathematics /Al-Mustansiriya University
Main references (sources)	Engineerring Mathematics,fourth edition, John Bird
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

مدرس المادة النظري

م. شامل محمد صالح حسن

رئيس قسم المكائن والآلات الزراعية

أ.م.نوفل عيسى محيميد

رئيس اللجنة العلمية

أ.د. أركان محمدأمين صديق