University: Shatt Al-Arab University

College: College of technical Engineering

Department Laser and Optoelectronics Engineering Technology

The First stage

Lecturer Name: Amjad Hashim Faisal

Academic qualification

Place of work: Shatt Al-Arab University

The Republic of Iraq

Ministry of Higher Education and Scientific Research

Scientific Supervision and Evaluation Authority

MODULE DESCRIPTION FORM

Course Lecturer	Amjad Hashim Faisal
e-mail	amjad_has88@yahoo.com
Title	Mathematics I
Course Coordinator	
Course Objectives	1. To introduce the student to the basic and advanced principles of calculus and integrations and its various applications 2. To develop his mental abilities when solving exercises. 3. Linking data with information to reach a solution to issues and benefit from them in other subjects.
Module Learning Outcomes	1. Define the determinants and be able to solution of linear equation 2. Recognize trigonometric functions and some applications. 3. Summarize what is meant by a scalar and vector product and projections. 4. Discuss the Limit and continuity. 5. Describe derivative theory. 6. Define Chain rule. 7. Identify the inverse function and its derivative. 8. Discuss Derivative of logarithmic and hyperbolic functions. 9. Discuss the definite and indefinite integral. 10. Explain the Retail integration. 11. Identify the Integration by completing the square.
Textbooks	1- Calculus, R. Mohammed and A. Abdulaali, 2002. 2- Advanced calculus, Murray R. Splegel, 1962.

final exam	Assignment	Quizzes	Repot	Midterm Exam
50	10	20	10	10
General Notes				

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	Delivery Plan (Weekly Syllabus)
	Material Covered
Week 1	Determinants and solution of linear equation by Gramer's rule
Week 2	Trigonometric functions and some applications
Week 3	Vectors, scalar and vector product and projections, mechanical applications to vectors
Week 4	Limit and continuity, and some applications
Week 5	Derivative theory, derivatives of algebraic and implicit functions
Week 6	Chain rule, mechanical applications on the derivative
Week 7	The inverse function and its derivative
Week 8	Derivative of logarithmic and hyperbolic functions
Week 9	Integration, definite and indefinite integral, integration of trigonometric and logarithmic functions
Week 10	Retail integration
Week 11	Integration by division of fractions
Week 12	Integration by trigonometric function method
Week 13	Integration by completing the square
Week 14	Simplified differential equations
Week 15	Approximate area using the trapezoidal rule and Simpsons
Week 16	**Preparatory week before the final Exam**

lecturers signature: Head of Department signature: