



Course Weekly Outline

Course Lecturer	Jawad Mahmoud Jassim				
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Title	Mathematics				
Course Coordinator					
Course Objective	Teaching the student the basic and advanced principles of calculus and its applications to develop student mental abilities to solve problems and make use of available information in the other scientific materials.				
Course Description	Teaching the student the basic and advanced principles of calculus and its applications to develop student mental abilities to solve problems and make use of available information in the other scientific materials.				
Textbook	Calculus by Thomas				
References	Advanced Engineering Mathematics				
Course Assessment	Quizzes	Assignments	Report	Midterm Exam	Final Exam
	15%	15%	10%	10%	50%
General Notes					



Week	Date	Topics Covered	Number of Hours	Notes
1	26 /11/2023	Determinants: properties, Cramer's Rule, Applications of Determinants	6	
2	3/12/2023	Vectors: vectors in Space, Unit Vector ,Scalar product, Vector product	6	
3	10/12/2023	Trigonometric Functions and Relations, Graph of Trigonometric Functions	6	
4	17/12/2023	Limits of functions, Algebraic limits, trigonometric limits, Limits at Infinity	6	
5	24/12/2023	Derivative Rules ,Algebraic & Trigonometric Derivatives, Chain Rule	6	
6	31/12/2023	Inverse Trigonometric Functions & their Derivatives. Exponential & Logarithmic Functions & their Derivatives	6	
7	7/1/2024	Hyperbolic & Inverse Hyperbolic Functions & Their Derivatives	6	
8	14/1/2024	Integration, Integral of trigonometric Functions & Exponential Functions	6	
9	21/1/2024	Integral of Hyperbolic Functions, L'Hoptial Rules	6	
10	28/1/2024	Integration Methods: Integration by Parts, Integration by Partial Fractions	6	
11	4/2/2024	Integration by Trigonometric Substitutions	6	
12	11/2/2024	Application of Integration: area under a Curve, Area Between Two Curves	6	
13	18/2/2024	Applications of Integration: Length of the Curve, Surface Area	6	
14	25/2/2024	Applications of Integration: volumes	6	
15	4/3/2024	Numerical integrals: Simpson Rule, Trapezoidal Rule	6	

16	11/3/2024	Preparatory week before Final Exam	6	
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Lecturer signature

Head of Department Signature