

Faculty of Engineering & Technology
Differentiation with Applications and Algebra

Information :

Course Code : EMP111

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Faculty of Engineering & Technology

Instructor Information :

Title	Name	Office hours
Lecturer	Basma Magdy Ahmed Mohamed	2
Assistant Lecturer	Mohamed Yahia Mohamed Abdelkader	
Teaching Assistant	Mohamed Fathy Salem Mohamed	

Description :

Calculus: Derivatives with all rules, Trigonometric functions and their derivatives, Definitions, properties, derivatives of transcendental functions. Hyperbolic and inverse hyperbolic functions. Application of derivatives: Extreme of functions and Curve sketching, Differentials and linear Approximation, Chain Rule and Implicit differentiation, Indeterminate forms and L'Hopital's rule, Derivatives in parametric functions.
Algebra: Definitions and properties of determinant and matrices; System of Linear equations, Eigen values and Eigenvectors of a matrix with applications, Gauss elimination method. Theory of nonlinear equations Numerical methods: Iteration methods, Newton's and modified Newton's method, Secant method