

Faculty of Engineering & Technology
Transformation and Numerical Analysis (Math 4)

Information :

Course Code : MTH 212 **Level :** Undergraduate **Course Hours :** 3.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Lecturer	Ahmed Mahsoud Mohamed ElHadidi	2
Lecturer	Mohamed Reda Ali Mohamed	
Lecturer	Hany Abd El Ghaffar Abd El Aty El Deeb	1
Assistant Lecturer	Basma Magdy Ahmed Mohamed	
Assistant Lecturer	TAREK ALI ABDALLAH TEAMA	5
Teaching Assistant	Mariam Mohamed Kamal Abdelaziz	

Description :

Laplace transformation: definitions, properties and theorems, Inverse transform, Solution of ordinary differential and integral equations by Laplace transform, Heaviside function and related theorems, Periodic functions and Dirac delta functions, Applications, Vector analysis: scalar and vector fields, Directional derivative, gradient, divergence and curl, Gauss's and Stokes's theorems, Fourier series: usual and arbitrary period, Fourier series of odd and even functions, Definitions and properties of Fourier transform with applications, Partial differential equations: definitions, types- D'fflambert solution of wave problem, Separation of variables for heat, wave, Laplace's equations in different systems of coordinates.