

Faculty of Engineering & Technology

Ordinary Differential Equations

Information :

Course Code : EMP211

Level : Undergraduate

Course Hours : 4.00- Hours

Department : Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Lecturer	Mahmoud Mohamed Mokhtar Abdulwadud Mohamed	2
Teaching Assistant	Marco Khair Mehani Hanna	

Description :

Functions of several variables: limits, continuity and partial derivatives, Chainrule, Tangent planes and normal lines, Extrema and constrained extrema, Ordinary differential equations: equations of first order (separable, homogenous, exact, linear and Bernoulli), Orthogonal trajectories, Equations reducible to first order, High order linear equations, The variation of parameters and operation method, Euler's equation, System of linear differential equations, Series and tests of convergence, Taylor and Maclaurin expansion, Multiple integrals: double integral in Cartesian and Polar coordinates, Triple integrals and Jacobians, Line integral, Green's theorem.