

**Faculty of Engineering & Technology****Numerical methods for engineers****Information :****Course Code :** EMP313**Level :** Undergraduate**Course Hours :** 3.00- Hours**Department :** Mechatronics Engineering**Instructor Information :**

Title	Name	Office hours
Lecturer	Rana Mohamed Abdel Rahman Saleh	1
Teaching Assistant	Mia Mohamed Fawzy Abdelhamid Alatawy	

**Description :**

System of linear equations, roots of equations, curve fitting (interpolation), numerical integration and differentiation, numerical solution of ordinary differential equations, Initial value problems and introduction to the finite difference method, System of partial differential equations. Inner product and orthogonality, diagonalization and canonical forms, Bilinear and quadratic forms. It includes a programming based project