Al-Nahrain University College of Science Department of Physics Subject: Numerical analysis Stage: Third year physics Semester : 2nd semester

Lecturer : Adnan A. Abdulfattah

Week	Topic Details
1	Error analysis
2	Solution of equation in one variable (Bisection method)
3	Solution of equation in one variable (Fixed point), (Newton-Raphsen)
4	Solution of non-linear system Newton method, iteration method
5	Newton method of n system
6	Numerical solution of system of linear algebraic Basic concept, Gauss method
7	Computing determinant, Jaccobi iteration method
8	Gauss- seidal method
9	Interpolation, Newton 1 st and 2 nd interpolation
10	Inverse interpolation and extrapolation
11	Least square fitting ,linear and nonlinear.
12	Numerical differentiation
13	Numerical integration
14	Solution of ordinary differential equation. Euler's method and , Milline's method
15	Solution of ordinary differential equation Runge- Kutta 's method.
16	Boundary value problem for ordinary differential equation