

JIS College of Engineering
(NAAC 'A' Accredited Autonomous Institution)

Syllabus for B. Tech (MECHANICAL ENGINEERING)
2ND YEAR 4TH SEM

Paper Name: Mathematics-IV (NUMERICAL METHODS AND APPLICATIONS)

Paper Code: M (ME) 491

Contact: 3P

1. Assignments on Newton forward /backward, Lagrange's interpolation.
2. Assignments on numerical integration using Trapezoidal rule, Simpson's 1/3 rule, Weddle's rule.
3. Assignments on numerical solution of a system of linear equations using Gauss elimination and Gauss-Seidel iterations.
4. Assignments on numerical solution of Algebraic Equation by Regular-falsi and Newton Raphson methods.
5. Assignments on ordinary differential equation: Euler's and Runge-Kutta methods.
6. Introduction to Software Packages: Matlab / Scilab/ Labview / Mathematica.