DEPARTMENT OF MATHEMATICS
FACULTY OF ENGINERING AND TECHNOLOGY
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
UMA15403 - NUMERICAL METHODS PRACTICAL USING C

LECTURE SCHEME / PLAN

INSTRUCTIONAL OBJECTIVES

1. To learn how to find roots of algebraic and transcendental equations.
2. To learn how to solve linear equations.
3. To learn the numerical differentiation and integration.
4. To learn how to solve partial differential equations.

Lect. No	Lesson schedule	Learning outcomes	Hours
1	Basic concepts of C	To know the basic structures of program	4
2	Gauss elimination method.	Students will demonstrate knowledge and able to understand the program of for loop, trigonometric functions They can easily understand, how to create a class and write a member functions.	3
3	Gauss-Jacobi method.		3
4	Gauss-Siedel method		3
5	Power method (eigenvalue).		3
6	Newton's forward and backward interpolation.		3
7	Lagrange interpolation.		3
8	Trapezoidal and Simpson one-third rules.	Students will easily get the idea about create a structure with use the class, create a class which consist of two virtual functions. They will create a file with line numbers	3
9	Euler's method.		3
10	Runge-Kutta's method.		3
11	Predictor-corrector method.		3

12	Model practical		09.04.2018

TEXT BOOKS

T.Veerarajan and T. Ramachandran, Numerical methods with programs in C, Tata McGraw Hill, (2006).

REFERENCES

1. E. Srinivasa Reddy, C Programming & Numerical Analysis, Pearson Education India, 2010.
2. Xevier, C, C Language and Numerical Methods, New Age International publishers, 2003. 3.

J. G. Kori, Numerical Methods in 'C', Firewall Media publishers, 2002.

Internal marks Total: 50