

Syllabus for B.Sc-IT Course

at S.P.College

SEMESTER -- IV

**COURSE TITLE :- COMPUTER ORIENTED
NUMERICAL METHODS.**

COURSE CODE--BIT—402

UNIT-I

Introduction : Requirements for solving problems by computer, pitfalls in computing , approximation and errors , significant figures , accuracy and precision , round off and truncation errors.

UNIT-II

Iterative methods: Introduction, Bisection method, Method of False position, Newton Raphson method, the Secant method.

UNIT-III

Solution of simultaneous, Algebraic equations: Introduction, Gauss elimination method, Gauss Seidel method.

UNIT-IV

Interpolation: Introduction, Lagrange interpolation, Newton's divided differences interpolations.

Solution of differential equation: Introduction, Euler's method, Runge Kutta second order method (Heun's method).

Recommended Books:

1. "Numerical Methods" by E BALAGURUSAMY".Tata McGraw Hill.
2. "Computer oriented numerical methods" by V.RAJA RAMAN. Prentice Hall of India.
3. "Computer oriented numerical methods" by Salaria