Skill Course (SC) for Semester IV

M4 STA 07-SC 01

Skill Course Elective 01

NUMERICAL ANALYSIS

L-T-P	2-0-0

TIME: 3 hours

External Assessment 80

Internal Assessment 20

UNIT I

Theory of Iteration: Simple iteration, Rate of Convergence, Acceleration a convergence, method for multiple and complex roots.

UNIT II

Convergence of iteration process in the case of several unknowns.

UNIT III

Real and complex roots, solution of transcendental and polynomial equations by using besection method, secant method.

UNIT IV

Regula-Falsi method, Newton Ruphson method, Chebyshev method and Muller method.

UNIT V

Concept of synthetic division, the Birge – vita, Bairstow and Graeffe's root squaring method. System of Simultaneous equations(Linear): Direct method of determinant, Gauss–Elimination.

Books Recommended:

1. Jain, Iyenger and Jain : Numerical Analysis.
2. Jain, M. K. : Numerical solutions of differential equation.
3. Chouhan D.S., Vyas P. & Soni. V. : Studies in Numerical Analysis