

**BACHELOR OF COMMERCE - SECOND SEMESTER**  
**NUMERICAL AND STATISTICAL METHODS**

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Code: SC2.5

Contact Hours: 56

Credits: 4

Evaluation: Continuous Internal Assessment – **30 Marks**  
Semester-End Examination – **70 Marks**

Univ Code:

Work load: **4 hours per week**

**Objectives:**

**Pedagogy:**

**Module1: Numerical Computing:** Computer arithmetic floating point numbers, operations, normalizations and their consequences, Errors in computations, Polynomial interpolation solution to linear and nonlinear equations.

**Module2: Statistical Computation:** Classification of data, Frequency distribution, measures of central tendency and dispersion, Skewness: Karl Pearson's and Bowley's co-efficient of Skewness.

**Module 3: Correlation and Regression Analysis:** Least Square Fit, Polynomial Curve Fitting, Multiple Regression.

**Module4: Probability:** properties of binomial, Poisson, normal and exponential probability distributions.

**Module5: Time Series and Forecasting:** Moving averages and Least Square methods smoothing of curves, forecasting models and methods.

**Recommended Books**

1. PradipNiyogi, Numerical Analysis and Algorithms, Tata McGraw Hill (2003).
2. Conte S.D and Carl DeBoor, Elementary Numerical Analysis, Tata McGraw Hill (1972).
3. S.C Gupta. And K.V.K Kapoor: Fundamentals of Mathematical Statistics, Sultan Chand and sons.
4. Balaguruswamy E., Computer Oriented Statistical and Numerical Methods, Tata McGraw Hill(2002).
5. Murray. R., Spiegel Probability and Statistics, Schaum's Outline Service (1975).
6. Goon A.M Gupta M.K and Dasgupta, Fundamentals of Statistics Vol. 1(1991) and Vol. 2, World Press, Calcutta (2001).

Practicals:

Practical: 2 Hrs. /Week

I.A Max. Marks: 20

Practical assignments on numerical and statistical methods studied in the above paper to be done using C. The internal assessment marks (Maximum Marks 20) shall be awarded by the concerned course teacher based on the two practical tests of 2 hours duration each conducted by him/her during the semester.