MANGALORE UNIVERSITY
Department of Statistics
MSc Statistics

Soft Core	STP406: Practical II :Using EXCEL and R- Programming	No. of Credits: 3

Course Outcomes:

CO1: Learn the Use graphical tools for data interpretation in R and Excel
CO2: Understand the R - programming language
CO3: Develop Macro programming for iterative computing using Excel
CO4: Develop User defined function using visual basic for different distributions
CO5: List the probabilities for various continuous and discrete distributions
CO6: Write and read documents from different environments into R.
CO7: Understand the use of loops and functions for computations
CO8: Understand R coding and implementation.
CO9: Know about debugging tools.
CO10: Learn to install and use R packages from repositories.

EXCEL Exercises

1. Reading data and creating data, certain computations using data. Descriptive Statistics and construction of frequency distribution. (At least two practicals).

2. Listing probabilities for standard distributions and plotting its probabilities and distribution functions.

3. Plotting density functions and distribution functions for standard continuous distribution functions.

4. Finding probabilities of certain sets in case of discrete and continuous distribution functions and Finding probabilities and critical values.

5. User defined function using visual basic (VB) – Plotting some general distribution function and finding certain probabilities.

6. Computation of annual salary of a randomly drawn employee (create problem so as to use LOOKUP function) and finding her net payable tax according to that year's Income tax.

7. Using macro programming for certain iterative computing (at least two practicals.)

R-Programming

1. Simple R exercises, using – scan function, reading data from EXCEL and exercises, vectors, matrices, rbind and cbind
2. Exercises on Matrices.
3. Reading data from text file. Data frames , names etc., Exercises based on these data and exercises on graphics
4. Exercises using iterative computations.
5. Functions in R Exercises - 1
6. Functions in R Exercises - 2
7. Generating a sample from general discrete distribution
8. Generating a sample from general continuous distribution
9. Verification law of large numbers and central limit theorem.