CHRIST COLLEGE (AUTONOMUS), IRINJALAKUDA

DEPARTMENT OF STATISTICS

VALUE ADDED FOUNDATION COURSE-7: FOU07- STATISTICAL ANALYSIS USING R

SYLLABUS (40 HOURS)

MODULE 1 (8HRS)

Introduction to R: R as a calculator, statistical software and a programming language, R preliminaries, getting help, data inputting methods (direct and importing from other spread sheet applications like Excel), data accessing, and indexing, Graphics in R, built in functions,

MODULE 2 (10HRS)

Descriptive statistics: diagrammatic representation of data (box plots, stem and leaf diagrams, bar plots, pie diagram, scatter plots), measures of central tendency (mean, median and mode), measures of dispersion (range, standard deviation, mean deviation), summaries of a numerical data.

MODULE 3 (10 HRS)

Normal Distribution, Plots to check Normality, Plotting probability curves for standard distributions, Correlation and Regression analysis**.**

MODULE 4. (12HRS)

Inferential Statistics: Parametric tests- t-tests, paired t test, chi-square tests, Non- Parametric tests-Kruskal Wallis tests, Wilcoxen's test, ANOVA (one- way and two-way). with nodes,

REFERENCES

1. Michale J. Crawley, THE R BOOK, John Wiley & Sons, England (2009

2. Sudha G. Purohit et.al., Statistics Using R, Narosa Publishing House, , India(2008)

3. John Verzani, simple R-Using R for Introductory Statistics,

(http://www.math.csi.cuny.edu/Statistics/R/SimpleR/Simple.)

4. W. N. Venables, D. M. Smith and the R Core Team, An Introduction to R , Notes on R: A

Programming Environment for Data Analysis and Graphics, Version 2.15.2 (2012-10-26)

(http://www.r-project.org)

[7] D. E. Knuth:The TEX Book. Addison-Wesley, Reading, second edition, 1986

** E- certificate will be provided to all students on completion of the course with 50% marks in the final examination and timely submission of assignments.