

Syllabus of Statistics

Statistical Computing and Introduction to Statistical Software

Credits: 04	Course Code: B060601T	Sem. VI
	External Max. Marks 75	Internal Max. Marks 25

Unit	Topic	No. of Lectures
I	Introduction to Computer: Generation of Computer, Basic Structure of Computer, Digital computer and its peripherals, number systems (Binary, Octal, Hexadecimal Systems), Flow chart for simple statistical problems.	08
II	Solid Understanding of Basics Excel: - Getting Start with Excel, Working with Cell and Ranges, Data Entry & Editing, Number formatting, Delete, insert and adjust cells, columns and rows, Preview and print workbook.	06
III	Custom Fill, Autofill, Flash Fill, Data & Time, Data Formatting, Sort & Filter, Grouping Sheets, Managing worksheets- Changing Name, Colour, Add, Delete, Hide/Unhide, Worksheet Views- Comparing Sheet Side by Side, Splitting Sheet into Panes, freezing Panes,	06
IV	Using Excel: Basic mathematical functions, Graphs, Descriptive Statistics, Analysis of Variance (One-way & Two way ANOVA), Karl Pearson correlation coefficient, Regression Analysis.	10
V	Introduction to R Programming and R Studio, Installing R, R as a calculator, Creating a data set, Understanding a data set Data structure: Vectors, Matrices, Arrays, data Frames, Factors and Lists	08
VI	Data input: Entering data from the keyboard, Importing Data, creating new variables recoding variable, renaming variables,	07
VII	Graphs using R: Inferential Statistics – Parametric test: Test for Normality, t-test for single mean, t-test for difference between means, paired t-test.	08
VIII	Using R: Wilcoxon signed rank sum test, Mann Whitney U test, Kolmogorov-Smirnov Test for normality, Analysis of Variance (One –way & Two way ANOVA), Karl Pearson correlation coefficient, Regression Analysis	07