

**COURSE OBJECTIVES:** The objectives of the course are to

1. Demonstrate use of basic functions
2. Create their own customized functions
3. Construct tables and figures for descriptive statistics
4. Learn to understand new data sets and functions by yourself
5. Work on built in real time cases for analysis and visualization

**COURSE OUTCOME:** On successful completion of this course, the students shall be able to

1. Setup R Programming Environment.
2. Understand and use R – Data types.
3. Understand and use R – Data Structures.
4. Develop programming logic using R – Packages.
5. Analyze data sets using R – programming capabilities

**LIST OF EXPERIMENTS:**

1. Download and install R-Programming environment and install basic packages using `install.packages()` command in R.
2. Learn all the basics of R-Programming (Data types, Variables, Operators etc.,)
3. Write a program to find list of even numbers from 1 to n using R-Loops.
4. Create a function to print squares of numbers in sequence.
5. Write a program to join columns and rows in a data frame using `cbind()` and `rbind()` in R.
6. Implement different String Manipulation functions in R.
7. Implement different data structures in R (Vectors, Lists, Data Frames)
8. Write a program to read a csv file and analyze the data in the file in R
9. Create pie chart and bar chart using R.
10. Create a data set and do statistical analysis on the data using R.