I am aiming to cover the below 3 main areas into details

1. Introduction
2. The environment (console, scripting and graphic window) – getting help, understanding the working space, input and output
3. R language – how does R work
4. R objects – assigning objects, variable and object names – list, vectors, matrices
5. Files and packages
6. Introducing R studio IDE

An Interactive session using a real-world dataset

* Objects and simple manipulations

1. Data management in R (basic and advanced)
2. Importing an external data – working with your own data
3. Formats for data reads(.csv,.txt,etc)
4. Functions to read in data
5. R statistical procedures (basic and advanced)
6. Selected basic statistical tests (base R packages)
7. Selected advanced statistical tests (external packages)

Miscellaneous

* Data manipulation/wrangling/munging using **dplyr**, **tidyr** and **plyr**
* Creating elegant graphs/plots using **ggplot2(**Grammar of graphics)

Reference materials

1. R in Action; Data analysis and graphics with R ~ *Robert I. Kabacoff* (Highly recommended)
2. R for Data Science; Import, Tidy, Transform, Visualize,and Model Data ~ *Hadley Wickham and Garrett Grolemund*
3. Introductory Statistics with R 2nd Edition ~ Peter *Dalgaard*
4. Guide to create Beautiful Graphics in R ~ *Alboukadel Kassambara*

General quick reference website

**Statistical tools for high-throughput data analysis @** <http://www.sthda.com/english/>

**Quick R :** <https://www.statmethods.net/r-tutorial/index.html>