# Course Description

**Course Title: Data Science Lab Course Code:**

**L-T-P Scheme: 0-0-2 Credit: 1**

**Course Content:**

**Course Objectives:**

This lab will help students to visualize data science concept practically. Students will learn concepts, techniques and tools they need to deal with various facets of data Using R, including data collection from various sources, filtering, exploratory data analysis, predictive modelling, descriptive modelling, data product creation, evaluation, and effective communication.

**At the end of the course students will be able to:**

* Obtain, clean/process, and transform data using R
* Use appropriate models of analysis, assess the quality of input, derive insight from results, and investigate potential issues
* Apply computing theory, languages, and algorithms, as well as mathematical and statistical models, and the principles of optimization to appropriately formulate and use data analyses
* Formulate and use appropriate models of data analysis to solve hidden solutions to business-related challenges
* Perform well in a group
* Interpret data findings effectively to any audience, orally, visually, and in written formats

**Course Content:**

Basic R programs to get familiar with data structures,

Series,

Data frames,

Panels

Different types of Indexing

Splitting data

Merging data

Reading data from various sources.

Cleaning data,

Translating data

Data Wrangling

Plotting

**Books:**

1. Wes McKinney, Python for Data Analysis, O’Reily

2. Avrim Blum, John Hopcroft and Ravindran Kannan. Foundations of Data Science.