

DEPARTMENT OF STATISTICS
DEVA MATHA COLLEGE, KURAVILANGAD

Affiliated to Mahatma Gandhi University, Kottayam



SYLLABUS

ADD ON COURSE
On

DMCK/STATS/AD 38/2021: Data Analytics Using R

Academic Year: 2021-22



DEVA MATHA COLLEGE KURAVILANGAD

DEPARTMENT OF STATISTICS

Add on Courses offered for Students:2021-2022

Data Analytics Using R
DMCK/STATS/AD 38/2021
Common/General Course for II PG.

Department Coordinator: Dr.Lishamol Tomy

Course Coordinator: Dr. Lishamol Tomy, Associate Professor, Department of Statistics

Instructional Hours: 30 Hours

Duration: 3 Months

Intake in a batch: 70-80 Students

Eligibility: Graduation

Mode of Instruction: Blended mode (Online and Offline)

R (Free Software) is one of the major software for the statistical analysis of data. Main objectives of this course are:

- To provide basic knowledge in Statistical investigation
- To experience working knowledge in R software with the objective of imparting awareness in data analysis using R
- To get benefitted the students from all streams including Science, Social science, literature, and Commerce and Management disciplines
- To practice the knowledge gained in their necessary project work of Degree Programme

SYLLABUS

Module 1: Basic Statistics

Introduction to Statistics, Statistical Investigation, Scales of measurement, Data Collection, Drafting Questionnaire, Presentation - Charts & Diagrams, Basics of Descriptive Statistics- Central Tendency, Dispersion, Skewness and Kurtosis, Correlation and Regression
(5 hours)

Module 2: Statistical Analysis Using R-I

Working knowledge in Excel, Entering Data in Excel, Importing data from Excel worksheet to R, Basics of R and RStudio, Install R and RStudio, Install and import library/packages in R, Data types in R
(3 hours)

Module 3: Statistical Analysis Using R-II

Analysis using R - Assessing relationships between continuous variables through plots - Measuring Central Tendency, Dispersion, Skewness and Kurtosis - Assessing relationships between continuous variables through correlation and Regression, Testing of Hypothesis, Case studies in R
(7 Hours)

Module 4: Project Work-Report Writing

Exercising the knowledge acquired by conducting a Project study with primary data collected through questionnaire method, Preparation of Report, Publishing research articles on statistical analysis of primary data (for advanced learners)
(15 hours)

Course Outcomes

- The students will be enabled to undertake data analysis tasks required in preparing project reports and dissertations using statistical techniques.
- The students can undertake research projects, field surveys, data compilation, graphical displays etc.
- The participants are tailored with demands for data analysts in the global analytics market.

Mode of Evaluation

Attendance, Project Work, and Examination

Assessment Procedure

Attendance – 30 Marks, Project Work – 20 Marks, Written Examination – 50 Marks, Total – 100 Marks

Grading

80-100% - A Grade

60-79% - B Grade

40-59% - C Grade

Below 40% - Grade- Not passed

*Separate Minimum required to get passed per individual elements– 50

References

1. Tilman M. Davies, The Book of R: A First Course in R Programming and Statistics, No Starch Press, San Francisco.

2. Eric Pimpler, Data Visualization and Exploration with R: A Practical Guide to Using R, RStudio and Tidyverse for Data Visualization Exploration and Data Science Applications, CreateSpace Independent Publishing Platform, Scotts Valley, California.

3. Rstudio Help



Principal
Deva Matha College
Kuravilangad - 686 633