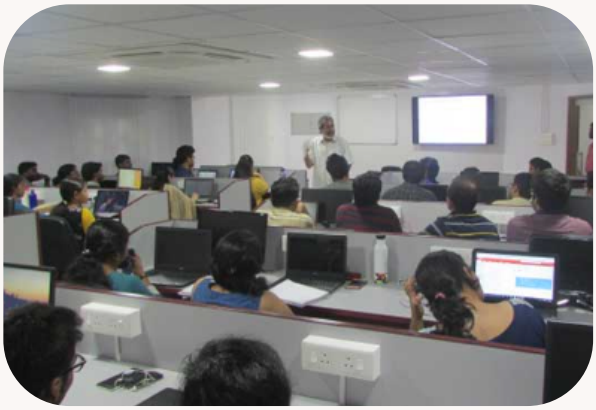
KERALA ECONOMIC ASSOCIATION

KERALA ECONOMIC ASSOCIATION (KEA)
IN ASSOCIATION WITH
CENTRE FOR DEVELOPMENT STUDIES (CDS)

ORGANISES

Five-Day National Workshop on

R - Programming for Beginners



DATES- 8-12 JUNE 2026

VENUE- CENTRE FOR DEVELOPMENT STUDIES THIRUVANANTHAPURAM

RESOURCE PERSON

Dr. Pankaj Narula

Thapar Institute of Engineering and Technology, Patiala, Punjab

Registration link - https://forms.gle/kBVVMYUyQSh8j5BS8

www.keaonline.org

mail@keaonline.org

KERALA ECONOMIC ASSOCIATION (KEA)

Kerala Economic Association (KEA) is a professional organisation that endeavours to provide a common platform for students, researchers, teachers, administrators, industrialists and others who are interested in the disciplinary domain of economics in general and the dynamics of the regional economy of Kerala in particular. The Association has been organising various academic activities such as public lectures, seminars, workshops, panel discussions, colloquiums on various topics related to economics with a view to enhancing the quality of teaching and research in economics in the State.

CENTRE FOR DEVELOPMENT STUDIES, THIRUVANANTHAPURAM

Established in 1970, the Centre for Development Studies is one of India's premier autonomous social science research institutions guided by the legendary economist K. N. Raj. Over the past five decades, CDS has emerged as a nationally and internationally reputed centre for research, teaching, and training in development studies, with significant contributions to understanding Kerala's economy and society as well as broader national and global development issues.

ABOUT THE RESOURCE PERSON

Dr. Pankaj Narula holds a Ph.D. in Applied Mathematics from the Indian Institute of Technology Mandi and completed his Master's degree in Pure Mathematics from Punjab University, Chandigarh. His academic and research interests lie in the areas of mathematical modelling, climate data analysis, and functional data analysis. His work has contributed to the understanding of environmental and climatic patterns, with research publications in reputed international journals. He has conducted workshops on topics such as social network analysis, bibliometric analysis and spatial data analysis in R software.

WORKSHOP PLAN

DAY 1	**Introduction to R and Programming Fundamentals** The first day focuses on helping participants become comfortable with the R programming language and its working environment using RStudio. The aim is to build confidence from the ground up. Participants will learn how R works, how to write basic commands, and how to work with different types of data such as numbers, text, and logical values. They will also be introduced to key data structures like vectors, matrices, lists, and data frames. Basic programming concepts such as conditional statements, loops, and simple functions will be explained in an intuitive manner. By the end of the day, participants should be able to write small R programs and perform basic data operations on their own.
DAY 2	**Data Import, Cleaning, and Transformation** The second day is devoted to working with real data, which is a central part of any analysis. Participants will learn how to import datasets from common file formats and understand how to deal with missing or messy data. The focus will be on practical data cleaning and preparation techniques. Modern tools such as dplyr and tidyr will be introduced in a simple and application-oriented manner. Participants will practice selecting, filtering, and transforming data, as well as reshaping datasets into useful formats. By the end of the day, they will be able to prepare raw data for meaningful analysis.
DAY 3	**Data Visualization** The third day is designed to help participants understand how to present data effectively through visualizations. It begins with basic plotting techniques in R and gradually introduces more structured and flexible visualization using ggplot2. Participants will learn how to create common plots such as scatter plots, bar charts, histograms, and line graphs. They will also explore how to customize these plots by adjusting labels, colors, and themes. The emphasis will be on using visualizations to communicate insights clearly and meaningfully.
DAY 4	**Statistical Analysis and Regression Modeling** The fourth day introduces participants to essential statistical methods within R. The session begins with descriptive statistics and basic probability concepts, followed by commonly used hypothesis testing techniques such as t-tests and chi-square tests. Participants will then move on to understanding relationships between variables through correlation and simple linear regression. The focus will be on interpreting results rather than complex theory, ensuring that participants can relate statistical outputs to real-world situations. By the end of the day, they will be able to carry out basic statistical analysis and build simple regression models.
DAY 5	**Advanced Regression Modeling and Model Diagnostics** The final day builds on the concepts introduced on the previous day and takes participants deeper into regression analysis. They will learn about multiple linear regression and how to work with different types of variables, including categorical data. A key part of the day will be understanding how to assess whether a model is appropriate. Participants will explore residual analysis and learn how to check important assumptions such as linearity, independence, constant variance, and normality. The session will also introduce ways to compare and improve models using measures such as R-squared and adjusted R-squared, along with simple transformations and extensions of models. An introductory discussion on logistic regression may be included to show how similar ideas apply to categorical outcomes. By the end of the workshop, participants will have a clearer understanding of how to build, evaluate, and refine statistical models in practice.

REGISTRATION DETAILS

🎓 UG/PG Students: ₹1000

🎓 PhD Scholars without fellowship: ₹2000

🎓 KEA Life Members & PhD Scholars with fellowship: ₹3000

👩‍🏫 Others : ₹4000

Registration Fee includes the expenses for course kit, lunch and tea.

Participants must bring their own personal laptops preloaded 'R Studio' for hands-on training. Limited accommodation is available on a firstcome, first-served basis for the duration of the workshop at the CDS Guest house on a shared basis at a nominal rate. No TA/DA will be paid for attending the course.

https://forms.gle/kBVVMYUyQSh8j5BS8

✅ Registration closes: 25 May 2026

📩 Intimation of selection: 27 May 2026

✅ Last Date for Fee Payment: 31 May 2026

📜 Participants will receive a certificate and are eligible for duty leave (Govt. of Kerala Order No.1864/2023/HEDN dated 16.12.2023).

PAYMENT INFORMATION

Account Name: Kerala Economic Association

Bank Name: Canara Bank, TVM Cantonment Branch

Account No.: 0819101097488

IFSC: CNRB0000819

UPI: keralaecoassn@cnrb

Selected participants will be shortlisted and notified via email/WhatsApp. Upon acceptance, participants must confirm their seat by remitting the fee through online payment (Bank transfer/UPI). Please note that the fee once remitted will not be refunded.

ORGANISING COMMITTEE

Prof. K N Harilal, President, KEA

Prof. C. Veeramani, Director, Centre for Development Studies

Sri.Santhosh T Varghese, General Secretary, KEA

Smt. Anitha Kumari L, Gulati Institute of Finance and Taxation

Prof. Beena P.L, Centre for Development Studies

Prof. Godwin S K, Treasurer, KEA -+91 9645446439 (Co-ordinator)

Dr. Nirmal Roy, Joint Secretary, KEA - +91 8907567536 (Co-coordinator)