# **R Programming and Statistical Analysis**

In this course, you'll learn the fundamental tools and packages to manipulate, organise, analyse, and visualise data using the R programming language in the RStudio developer environment.

## **IS THIS COURSE FOR YOU?**

This course is for those who are interested in learning the R programming language for the purposes of data manipulation, statistical computing, and graphical display of data.

## **ABOUT THE COURSE**

The course includes a series of video lectures combined with a variety of conceptual and hands-on activities to help you develop skills in manipulating and analysing data, interpreting results, and visualising your data effectively.

R is widely recognised as a powerful programming language and environment for data manipulation, statistical computing, and graphical display. R provides a variety of tools and techniques and is easily extensible. It's an open-source programming language and a vital tool for data wrangling and analysis. R also includes a robust data handling and storage facility, as well as an extensive, integrated collection of tools for data analysis and graphical display.

You'll explore all of this and more as you work through the three modules of the course and test your understanding with the knowledge tests at the end of each section.

#### AIMS AND OBJECTIVES

The aim of the course is for you to develop a strong foundation in the R programming language that you can put to effective use in the field of data analysis.

#### **PRE-REQUISITES**

Strong critical-thinking and problem-solving skills, a strong background in mathematics (e.g., advanced algebra), and some experience with coding.

## **COURSE CONTENT**

**Module 1: R Programming for Beginners** Getting Started with R; Exploring R Vectors; Leveraging R with Matrices, Arrays, and Lists; Understanding Data Frames, Factors, and Strings

course outline

**Module 2: Datasets in R** Loading and Saving Data; Transforming Data; Selecting, Filtering, Ordering, and Grouping Data; Joining and Visualising Data

**Module 3: Statistical Analysis and Modelling in R** Working with Probability Distributions; Understanding and Interpreting Statistical Tests; Statistical Analysis on Your Data; Performing Regression Analysis

# **CAREER PATH**

To become an effective data analyst, you'll need several programming languages in your toolkit. R is among the most sought-after skills among data analysts.

# **COURSE DURATION**

40 hours. This will vary based on prior knowledge and ability.



CPD POINTS: 40

CPD points awarded upon successful completion

To find out more, speak to one of our course advisors.



Building careers for 180 years.