

Introduction to R

R is a versatile language for statistical computing and graphics. In this course you will learn the advantages of using R and how to get started. You will gain familiarity with the RStudio interface and learn the R basics. Also included is an introduction to the Tidyverse and how to use various packages for data storage, visualisation and manipulation. This course provides a great foundation to begin your R journey!



Course Outline

- Introduction to R:
 - Overview
 - Background
 - Features of the R statistical programming system
- Data entry:
 - Importing data
- Data types:
 - Numeric
 - Float
 - Binary
- R environment:
 - Introduction
 - Working directory
 - Creating/using scripts
 - Saving data and results.
- R graphics:
 - Brief introduction to {ggplot2}
 - Creating, editing and storing graphics
- Summary statistics:
 - Measures of location and spread
- Manipulating data in R:
 - Describing how data can be manipulated using logical operators and {dplyr}
- Vector operations:
 - Details of R's vectors operations

Learning Outcomes

Session 1

By the end of session 1, participants will...

- have a clear understanding of R/RStudio IDE and its background.
- be familiar with navigating the RStudio IDE.
- understand the core fundamentals of R.
- understand functions and arguments.
- be able to create vectors and applying functions.
- be exposed to the tibbles and `{tidyverse}` package.

Session 2

By the end of session 2, participants will...

- be able to comfortably import, export, and store data in R.
- have a basic introduction to graphics with `{ggplot2}`.
- have a basic understanding of manipulating data manipulation with `{dplyr}`.
- understand logical and relational data partitioning.

This course does not include:

- An advance usage of `{ggplot2}`.
- Advanced data analyses, wrangling and manipulation techniques. For data cleaning and manipulation see our [Data Wrangling with Tidyverse](#) course.
- A description of automated reporting using R Markdown, see our course [Reporting with R Markdown](#).

Attendee Feedback

- “John spoke at a nice pace which allowed me to digest what was being said/keep up; regular breaks - to keep the brain alert (or at least helped!)”
- “Very interesting course and plenty of resources to look into”
- “Highly knowledgeable trainers”
- “Flowed well, easy to follow, and clear instructions”
- “Our instructor Theo was great, I had never used R and was able to keep up with everything going on”