Introduction to R

In this course, you'll explore the versatility of R, a powerful language for statistical computing and graphics. Discover the benefits of using R and get started with the basics. Gain confidence with the user-friendly RStudio interface and learn fundamental R concepts. You'll also dive into the Tidyverse, a collection of packages for data storage, visualization, and manipulation. This course offers a solid foundation to kickstart your journey with R!

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"