



BANCO DE PORTUGAL  
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# Introduction to R

**Lisbon, June 5-7, 2019**

**3 days Course**

Rita Sousa (DEE - BPLIM)

## Training schedule

10:00 – 13:00

13:00 – 14:00 – Lunch

14:00 – 17:00

## Training Programme

1. What is R?
  - ✓ Goals of the R Foundation
  - ✓ What is included in R
  - ✓ Advantages of using R
2. R Essentials
  - ✓ R environment
  - ✓ Main commands
  - ✓ Help functions
  - ✓ Main operators
  - ✓ Syntax rules
3. Packages and useful resources
  - ✓ Installing R Packages
  - ✓ Text editors for R
  - ✓ R Commander installation
  - ✓ Getting started with RStudio



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# Introduction to R

4. Objects in R
  - ✓ Vectors, operations and arithmetic functions
  - ✓ Indexing
  - ✓ R sequences
  - ✓ Other objects: matrix, factor, list, data frame, functions
  - ✓ Control flows
  - ✓ Modes and attributes
  - ✓ Missing, unique and duplicated values
  - ✓ Sorting and comparison functions
5. Data Import and Export
  - ✓ Import Data into R: Read CSV, Excel, SPSS, Stata, SAS Files
  - ✓ Data editing
  - ✓ Editing or viewing data frames
  - ✓ Subset data
  - ✓ Database connection
  - ✓ How to use RODBC Package
6. Exploratory Data Analysis in R
  - ✓ Descriptive statistics
  - ✓ Tabulation functions
  - ✓ Data Aggregation
  - ✓ Linear Regression
  - ✓ Main graphical facilities
  - ✓ Introduction to ggplot2