Introduction to R

R is considered the world's most powerful programming language for statistical computing, machine learning and data visualization and is also known for a thriving community of users, developers and contributors. Its popularity and user numbers are rising steadily.

This course provides an introduction to R and its most popular integrated development environment (IDE) RStudio. We cover both Base R functionality and some additional packages that make using R more convenient. Examples we look at include data on rock music history and the sinking of the titanic.

Topics
Introduction to R and RStudio

- Some background information on R

- How and why to use R together with Rstudio

- Working in the console (command line)

- Data structures in R: vectors, matrices, arrays, lists, data frames, factors

- Atomic data types: logical, numeric, character

- Using R scripts, Functions in R

Data preparation in R

- Base R and recommended packages

- Importing data from and exporting to various data formats

- Creating, transforming and deleting variables; sorting and filtering Describing data sets, obtaining summary statistics

Statistical Analysis

- Correlation analysis, tests of significance

- Regression analysis

- Decision trees

Communicating results: Visualization and Reports

- Introduction to Base R graphics and ggplot2

- Introduction to Reporting using R Markdown

Prerequisites for taking this course

While programming experience may help in learning R, this course does not assume prior programming skills. However, a willingness to write R code is required.

Please note

This workshop cannot be credited as qualification measures at the Department of Mechanical Engineering. However you are welcome to participate.

This course will be held in English.

WHEN
16.09.2021	09:00 - 13:00
17.09.2021	09:00 - 13:00
20.09.2021	09:00 - 13:00
21.09.2021	09:00 - 13:00

BOOK HERE