PhD Program in Plant Sciences - Digital Skills: Introduction to R

Lecturer:	Dr. Jan Wunder
Location:	ETH Zurich, tba
Dates:	Jan 17 & 24, 2025
Time:	9:00 – 17:00
Credit Points:	1 ECTS

Course Objectives

This basic introduction to R focuses on the technical aspects of data organisation, handling, analysis and presentation using the wide-spread command line statistics package R. This course is _not_ an introduction to statistics, but lays the foundation to efficiently use statistical applications of R, which are introduced in other courses. The course addresses students who would like to become familiar with a powerful, single and freely available alternative to spreadsheet programmes (Excel), other, less flexible commercial statistical packages (SPSS, Jump, Minitab etc.) and graphics software for presenting data (Excel, Sigmaplot etc.).

Course Program

Topics covered include proper organisation of the workspace, reading and writing data files, using logic operators, manipulating data frames, summarising and aggregating data, programming 'ifelse' statements, loops, short routines, drawing and customising graphs. Depending on the course progress, there will be scope for individuals to work on small projects and / or their own data sets.

Prior Knowledge: No previous experience with programming languages is required.

Number of Participants: Participation is limited to 16 people.

Students are required to bring their own computers

Reading: - The R Book (2022). Jones, Harden, Crawley. John Wiley and Sons.
- Free online sources

Individual Performance and Assessment:

Attendance and active participation during the course days (14 hours).
In order to obtain the credit points, participants are required to hand in an assignment to be carried out at home (preparation work of 14 hours). The details will be explained during the course. The assignment is due no later than one week after the course has ended.