

Data Analysis in Ecology using R

12th – 16th Sept.
2022
Wendland

Venue:

The seminar house
Proitzer Mühle, situated
in the rural landscape of
Wendland.

www.proitzermuehle.de



Contact:

For further information
and registration contact
us via email:

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Background and scope

R is an incredibly powerful statistical environment and one of the most used statistical tools in life sciences. It is also free and open source. However, R has a steep learning curve. Moreover, introductory level courses are scarce and costly. With this course we aim to guide participants with little or no previous experience, students and professionals alike, through the R environment and its application in data analysis.

What to expect?

This workshop aims at making you comfortable with the R programming language, handling and tidying ecological datasets, and creating graphical outputs.

As instructors, we are interested in providing a supportive learning environment that acknowledges the diversity of the learning process. Our main aim is to enable students to be independent by building a strong understanding of R commands and the principles of data analysis.

Preparation for the course

- Participants must have access to a laptop.
- Make sure to have a current version of the R software and R Studio installed on your computer before the start of the course.

To install R: <https://cran.r-project.org/>

To install RStudio: <https://www.rstudio.com/>

- If you have already previously installed R, check that your R version is no older than 4.2 (the R version is shown when you start R). Please update, if necessary.

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Course format

Throughout the workshop, we will give short presentations followed by practical sessions. We will guide you through R code that you will learn to apply using example datasets.

We will use published ecological datasets. All of the material will be shared with you at the beginning of the course.

Timetable *

| | |
|---------------|---------------------|
| 08:00 – 9:00 | Breakfast |
| 09:00 – 10:45 | Lecture + Practical |
| 10:45 – 11:00 | Coffee break |
| 11:00 – 12:30 | Lecture + Practical |
| 12:30 – 14:00 | Lunch |
| 14:00 – 15:30 | Lecture + Practical |
| 15:30 – 16:00 | Coffee break |
| 16:00 – 17:30 | Lecture + Practical |

* The course starts on Monday 12th at 11:00 and finishes on Friday 16th at 15:00

| | Morning Session | Afternoon Session |
|------------|---|---|
| Sept. 12th | Welcome to the course | Importing data & basic commands |
| Sept. 13th | Review exercise and Data manipulation | Plotting in R (ggplot2) |
| Sept. 14th | Review exercise & Data exploration | Basic statistical tests * 16.00-18:00 free and optional tour of the INOQ institute |
| Sept. 15th | Linear models & model validation (part 1) | Linear models & model validation (part 2) |
| Sept. 16th | R Markdown | Final remarks |



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