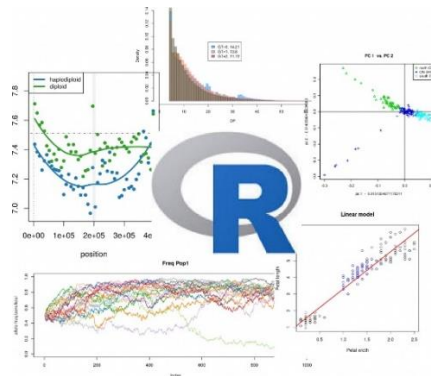# cE3c Advanced Courses 2024/2025

Advanced R for Ecology and Evolutionary Biology

Taught by: Inês Fragata (cE3c, EE Research Group), Vitor Sousa & Alexandre Blanckaert (cE3c, EG Research Group)| **June 30 – July 4 2025 @ FCUL**

General Plan

1) Refresher into R

2) Exploratory analysis for ecology and evolution (Principal Component Analysis)

3) Linear regression and ANOVA

4) Hypothesis testing using bootstrap and permutations

5) Introduction to analysis of population genetics in R

6) Modeling and simulation of dynamics systems

7) Bayesian statistics and advanced inference algorithms (Markov chain Monte Carlo)

8) Students case studies.

Deadline for applications: **May 23, 2025**

The course is free for a maximum of 10 1st year PhD students in Doctoral programmes at FCUL (e.g. Biology), Biodiversity, Genetics and Evolution (BIODIV UL, UP), Biology and Ecology of Global Changes (BEAG UL, UA) and Sustainability Science (UL). For information of fees for other participants see the programme details.

See the PROGRAMME, how to apply and fees at:

https://ce3c.ciencias.ulisboa.pt/training/ver.php?id=254