FEDERAL UNIVERSITY OF SANTA CATARINA
GRADUATE COURSE IN ECOLOGY

SYLLABUS

SEMESTER 01 / 2026

1. GENERAL INFORMATION

CODE	COURSE NAME	WORKLOAD - WEEK		WORKLOAD - SEMESTER
ECO410030	Ecological data and graphs in R	30		30
	Number of students	Minimum: 4	Maximum: 20	N of credits: 1

2. SCHEDULE

March 10th to 12th (Tuesday, Wednesday and Thursday).
Mornings starting at 8:30 AM until 12 AM, afternoons starting at 2 PM until 5 PM.

3. LECTURERS

Dr. Luis Carlos-Pinto (luismacedosoares@gmail.com)

4. GRADUATE COURSE

Ecology

5. COURSE OUTLINE

First steps in R: installing R and additional packages. The R language: functions, data types, objects and graphs. Data entry: vectors, matrices, data-frames and lists. The course will be taught in Portuguese.

6. COURSE OBJECTIVES

To train MSc and PhD students in their first steps in R programming. We expect all students who finished the course will have a background to start learning in statistical analysis and to load data and prepare graphs in R environment.

7. DESCRIPTION OF METHODS

The course will be held for 3 consecutive days. The course is mainly practical, so all practices will be carried out on computers. We ask to all enrolled students, if possible, to bring their own computers.

8. ASSESSMENT

We will use participation and ability to use the tools learned in the classes as means of assessment.

9. COURSE PROGRAM

-Module 1 (Tuesday/March 10th). Introduction to the environment R: Program installation, creation and manipulation of simple objects, basic graphics
-Module 2 (Wednesday /March 11th) Different types of objects (functions, vectors, matrices, factors, lists and data tables), indexing and extraction, related graphics
-Module 3. (Thursday /March 12th) Loading and manipulating data, and an introduction to databases, more graphics.

10. REFERENCES

-Crawley,Michael J.2005. Statistics: an introduction using R. Imperial College of London, UK, 337p.
-Dalgaard, Peter. 2008. Introductory statistics with R. Second Edition. Springer Science & Business Media, 267p.
-Logan, Murray. 2010. Biostatistical Design and Analysis Using R: a practical guide. John Wiley & Sons. 547 p.
-Quick-R: Accessing the power of R. http://www.statmethods.net/
-Vries,A; Meys, J. 2012. R for Dummies. John Willey & Sons. 387p.