



FEDERAL UNIVERSITY OF SANTA CATARINA
GRADUATE COURSE IN ECOLOGY



SYLLABUS

SEMESTER 01 / 2020

1. GENERAL INFORMATION

CODE	COURSE NAME	WORKLOAD - WEEK		WORKLOAD - SEMESTER
ECO410030	Ecological data analysis and graphs in R	30		30
	Number of students: 25	Minimum: 30	Maximum: 30	N of credits: 1

2. SCHEDULE

March 4th to 6th (Tuesday, Wednesday, and Thursday)

Mornings starting at 8 AM until 12 AM, afternoons starting at 2 PM until 6 PM.

3. LECTURERS

Prof. Dr. Eduardo Giehl

Dr. Thiago Silveira

Dra. Aurea Lemes

Dr. Luis Macedo

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

- Module1 (Tuesday/March 4th). Introduction to the environment R: Program installation, creation and manipulation of simple objects, basic graphics
- Module 2 (Wednesday/March 5th) Different types of objects (functions, vectors, matrices, factors, lists and data tables), indexing and extraction, related graphics
- Module 3. (Thursday/March 6th) Getting help, loading and manipulating data, and an introduction to databases

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/>
- De Vries,A; Meys, J. 2012. R for Dummies. John Willey & Sons. 387p.