



FEDERAL UNIVERSITY OF SANTA CATARINA
GRADUATE COURSE IN ECOLOGY

SYLLABUS



SEMESTER 01 / 2022

1. GENERAL INFORMATION

CODE	COURSE NAME	NUMBER OF STUDENTS		WORKLOAD - SEMESTER
	Tools and solutions for scientific manuscript writing	Minimum: 5	Maximum: 15	30 h (2 credits)

2. SCHEDULE

April 26th to May 24th (Tuesday's afternoons starting at 2 PM until 6 PM)

Lectures, demos, and discussion will be held as on-site activities. Locations will be informed after enrollment.

3. LECTURER

Prof. Dr. Eduardo Giehl

4. GRADUATE COURSE

Ecology

5. COURSE OUTLINE

Styles, summaries and other options of text editors (e.g. Microsoft Word); Finding and managing references (Mendeley); Metadata, importing and exporting references; Inserting references in text editors; Images: Using R and image editing software to design high-quality graphics; Differences between bitmap and vector formats. Reproducibility; Computational tools for reproducibility (R and Markdown, ResultER package); Creating stylized and reproducible documents with R and Markdown. The course will be taught in Portuguese.

6. COURSE OBJECTIVES

Build students capacity to explore and use a set of existing tools that can facilitate daily tasks related to scientific writing.

7. DESCRIPTION OF METHODS

The course will be held as on-site activities (e.g. lectures, demos, and discussion; 2/3 of its duration), but with supporting texts and exercises on implementing the tools or strategies presented (1/3 of its duration). Subsequent on-site meetings will address difficulties during completion of task assignments and complemented it with explanations and demonstrations.

All enrolled students should bring their own computers.

8. ASSESSMENT

Completion of practical exercises

Production of a final document using the tools and strategies discussed during the course.

9. COURSE PROGRAM

Presented in the form of an instructional matrix at the end of this document.

10. REFERENCES

Cottrell, A. 1999. **Word processors: Stupid and inefficient**. Available at

<http://www.ecn.wfu.edu/~cottrell/wp.html>

Heard, S. B. 2016. **The scientist's guide to writing**: How to write more easily and effectively throughout your scientific career. Princeton University Press.

RStudio. **R Markdown from RStudio**. Available at <http://rmarkdown.rstudio.com/lesson-1.html>

Shalizi, C. 2016. **Using R Markdown for Class Reports**. Available at

<http://www.stat.cmu.edu/~cshalizi/rmarkdown/>

Xie, Y. 2015. **Dynamic Documents with R and knitr**. CRC Press. Available at

<https://tinyurl.com/mad8exr5>

Instructional matrix

Activity	When?	Workload	What?	Details	How?	Assessment
1	April 26 th 14:00 - 18:00	4h	Presentation of the discipline and introductory discussion Preparatory organization for the writing process	Presentation of methods and teaching plan; Introductory discussion about processes and difficulties related to scientific writing; What the discipline is about and what it is not Document organization schemes (working texts, figures, tables, references); Auxiliary documents (scripts)	Lectures, demos and discussion	None
2	Before activity 3	2h	Preparatory organization for the writing process	Exercise of producing a manuscript outline	Reading and practical assignments	Submit outline via Moodle
3	May 3 rd 14:00 - 18:00	4h	Underused tools in text editors; Types, quality and editing images	Discussion of the exercises Discussion of the support text Styles, summaries and other text editor options; Using R to generate high-quality images; Brief introduction to additional processing of vector images	Lectures, demos and discussion	Engagement in debates
4	Before activity 5	2h	Underused tools in text editors; Types, quality and editing images	Exercise using text editor tools	Practical assignments	Submit assignment via Moodle

Activity	When?	Workload	What?	Details	How?	Assessment
5	May 10 th 14:00 - 18:00	4h	Management and formatting of bibliographic references	Discussion of the exercises Searching and managing references using Mendeley; Metadata, importing and exporting references; Insertion of references in text editors;	Lectures, demos and discussion	Engagement in debates
6	Before activity 7	2h	Management and formatting of bibliographic references	Exercise: building and using a reference library alongside text editors	Reading and practical assignments	Submit assignment via Moodle
7	May 17 th 14:00 - 18:00	4h	Reproducible workflows in R	Discussion of the exercises Discussion of the support text Computational tools for reproducibility (R + Markdown, ResultR package); Creating stylized and reproducible documents with rmarkdown	Lectures, demos and discussion	Engagement in debates
8	Before activity 9	2h	Reproducible workflows in R	Introductory exercise on organizing and formatting documents in R and reading supporting texts (e.g. Xie 2015)	Reading and practical assignments	Submit assignment via Moodle
9	May 24 th 14:00 - 18:00	4h	Discussion of previous activities	Discussion of the exercises Discussion of the support text	Lectures, demos and discussion	Engagement in debates
10	To be set	2h	Completion of the final assignment	Use of the tools and strategies discussed to prepare a short version of manuscript (project, chapter of the thesis or dissertation, or other)		Submit manuscript via Moodle