FEDERAL UNIVERSITY OF SANTA CATARINA
GRADUATE COURSE IN ECOLOGY

SYLLABUS

SEMESTER 01 / 2022

1. GENERAL INFORMATION

CODE	COURSE NAME	WORKLOAD - WEEK		WORKLOAD - SEMESTER
ECO4100-02	**Benthic Ecology**			
	Number of students	Minimum: 4	Maximum: 20	N of credits: 4

2. SCHEDULE

July 18th to 23th (Monday to Saturday)
Mornings starting at 7:30 AM until 12 AM, afternoons starting at 1 PM until 6:30 PM.

3. LECTURERS

Dr. Paulo Horta (2 credits), Dr. Paulo Pagliosa (2 credits)

4. GRADUATE COURSE

Ecology

5. COURSE OUTLINE

Analysis and application of concepts, theories, models and methods for understanding the dynamics of organisms and the benthic environment, including the main themes of applied ecology: functional ecology, biodiversity, conservation biology, global changes, environmental pollution, environmental monitoring, land use, biotechnology, invasive species, protection areas, restoration ecology, species, environmental, pest and disease management.

6. COURSE OBJECTIVES

To train MSc and PhD students in their first steps in Benthic Ecology. We expect all students who finished the course will have a background to characterize and evaluate benthic community structure and discuss the main drivers.

7. DESCRIPTION OF METHODS

The course will be carried out in a concentrated way, in person. There will be theoretical classes (synchronous if necessary due to possible sanitary demand), lectures, discussion of scientific texts and practical classes in the field and laboratory. From teaching topics, with students and the presentation of the context of environments and of the benthic organisms will be selected to be projects of local and developed environments, in the development of global projects as being an element considered for the learning process.

8. ASSESSMENT

Assessment will be based on the presentation of seminars (weight 1), participation in synchronous classes, field and laboratory (weight 1) and the delivery of a final report (weight 3).

9. COURSE PROGRAM

Dia	Data	H	Tipo	Conteúdo
1	18/07	07:30-12 AM	P	Course proposal: seminars and practical research; Definition of concepts and circumscription of currently highlighted environmental problems
		1-6:30 PM	R	Selection of study focus(s), selection of seminar topics and sample/experimental design
2	19/07	07:30-12 AM	P	Data Prospecting and Preparation
		1-6:30 PM	R	Work development
3	20/07	07:30-12 AM	P	Work development
		1-6:30 PM	R	Work development
4	21/07	07:30-12 AM	P	**Responses of biological communities to environmental changes**
		1-6:30 PM	R	Work development
5	22/07	07:30-12 AM	P	**Methods in Benthic Ecology** Work development
		1-6:30 PM	P	**Methods in Benthic Ecology2** Work development
6	23/07	08-12		**Presentation of seminars**
		1-6:30 PM	P	**Presentation of seminars**

10. REFERENCES

BOOKS

Clarke, K.R. & Warwick, R. M., 2001. Change in Marine Communities. An approach to statistical analysis and interpretation. National Environment Research Council, U. K., 144p.

Gray, J.S. & Elliot, M. 2009. Ecology of marine sediments: from science to management. Oxford University Press. 225p.

Underwood, A.L. 1997. Experiments in ecology: their logical design and interpretation using analysis of variance. Cambridge University Press. 504p.

Underwood, A.J.; Chapman, M.G. 1995. Coastal marine ecology of temperate Australia. UNSW, 341p.

OTHERS

Biological Conservation (http://www.sciencedirect.com/science/journal/00063207)

Biological Invasions (http://www.springerlink.com/content/1387-3547)

Community Ecology (http://www.akademiai.com/content/119710/)

Ecological Indicators (http://www.sciencedirect.com/science/journal/1470160X)

Ecological Applications (http://www.esajournals.org/loi/ecap)

Ecology (http://www.esajournals.org/loi/ecol)

Ecology Letters (http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291461-0248)

Frontiers in Ecology and the Environment (http://www.esajournals.org/loi/fron)

Functional Ecology (http://www.functionalecology.org/view/0/index.html)

Journal of Animal Ecology (http://www.journalofanimalecology.org/view/0/index.html)

Journal of Applied Ecology (http://www.journalofappliedecology.org/view/0/index.html)

Journal of Ecology (http://www.journalofecology.org/view/0/index.html)

Methods in Ecology and Evolution (http://www.methodsinecologyandevolution.org/view/0/index.html)

Marine Pollution Bulletin (http://www.sciencedirect.com/science/journal/0025326X)