



UNIVERSIDADE FEDERAL DE SANTA CATARINA
CENTRO DE CIÊNCIAS BIOLÓGICAS
DEPARTAMENTO DE ECOLOGIA E ZOOLOGIA
PROGRAMA DE PÓS-GRADUAÇÃO EM ECOLOGIA

Code: ECO510042

Course: Methods in Ecology

Credits: 03

Total hours: 45

Instructor: Áthila Bertoncini Andrade (athilapeixe@gmail.com)

Semester/Year: 01/2023

Schedule: April 5th 2023 to June 16th 2023 (details below)

Timetable: 9:00 to 12:00 and eventually 14:00 to 18:00 (details below)

Vacancy: 15

Lectures: ECZ UFSC

Lecture environment: Lecture will be in person, with debates.

Timetable and students : In person classes, eventually *online*, following the schedule below.

Prerequisites: None

Syllabus:

Presentation and debates of methods used in field work campaigns in the broad thematic of environmental sciences, along with research results and scientific articles, considering students research projects, as well as correlated areas. This course will not focus on data analyses, but rather on methods to acquire data, their nature and details. Presentation of methods and novel techniques in the broad areas of Ecology and Environmental Sciences. Students will experience fieldwork and data gathering.

Methods:

Talks, debates, discussions and working/studying groups.

Exam:

Portfolio (*logbook*) to be prepared by each student, keeping up and reporting learned contents and read references, as well as, interaction and discussion along the classes.

Program and Schedule:

Date	Time	h	Professor	Topic
05/4 (WED)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
12/4 (WED)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
19/4 (WED)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
24/4 (MON)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
3/5 (WED)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
8/5 (MON)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
22/5 (MON)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
24/5 (WED)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
24/5 (WED)	14:00 -18:00	4	Áthila	Seminars – In person class
31/5 (WED)	8:00 -12:00	4	Áthila	Sampling Methods – In person class
14/6 (WED)	9:00 -12:00	3	Áthila	Sampling Methods – In person class
16/6 (FRI)	Whole day	10	Áthila	Field trip for <i>in situ</i> sampling

Basic Literature and links of interest:

Articles, internet websites and reference materials will be selected and posted in the learning virtual environment.

AIMS, 2004. **Methods for Ecological Monitoring of Coral Reefs**. Townsville, Australia.123p.

Bouchet P, Meeuwig J, Huvneers C, Langlois T, Letessier T, Lowry M, Rees M, Santana-Garcon J, Scott M, Taylor M, Thompson C, Vigliola L, Whitmarsh S. 2020. **Marine sampling field manual for pelagic BRUVs (Baited Remote Underwater Videos)**. In **Field Manuals for Marine Sampling to Monitor Australian Waters**, Version 2. Przeslawski R, Foster S (Eds). National Environmental Science Program (NESP).

Desiderà, E., Trainito, E., Navone, A. *et al.* **Using complementary visual approaches to investigate residency, site fidelity and movement patterns of the dusky grouper (*Epinephelus marginatus*) in a Mediterranean marine protected area.** *Mar Biol* 168, 111 (2021). <https://doi.org/10.1007/s00227-021-03917-9>

Mallet D. & Pelletier D. 2014. **Underwater video techniques for observing coastal marine biodiversity: a review of sixty years of publications (1952 2012)**. *Fish. Res.* 2014; **154**: 44-62

Mouy, X; Blac, M; Cox, K; Qualley, J; Mireault, C; Dosso, S & F Juanes, 2021. **FishCam: A low-cost open source autonomous camera for aquatic research**. *HardwareX* 8 (2020) e00110.

Rogers, CS; Garrison, G; Grober, R; Hillis, Z-M & MA Franke, 2004. **Coral Reef Monitoring Manual for the Caribbean and West Atlantic**. Virgin Islands. 114p.

Simões Amorim TO, Rezende de Castro F, Rodrigues Moron J, Ribeiro Duque B, Couto Di Tullio J, Resende Secchi E, et al. (2019) **Integrative bioacoustics discrimination of eight delphinid species in the western South Atlantic Ocean**. *PLoS ONE* 14(6): e0217977.