



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 Ecology¹

Credits: 03

Total hours: 45

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

Semester/Year: 01/2022

Schedule: 13/06/2022 to 18/07/2022 (details below)

Timetable: 10:00 to 12:00 and 14:00 to 18:00 (details below)

Vacancy: 15

Lectures: hybrid environment

Lecture environment:

When not in person, lectures and debates will be performed at *Streamyard* or other platforms. For students impossible to attend, lectures will be recorded and available in at specific link.

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.

¹The learning plan may be adapted, exceptionally, to replace in person classes for virtual classes, while the pandemics of COVID-19 remains, attending the Ordinance of MEC 344, of June 16th, 2020 and the Resolution 140/2020/CUn, of July 24th, 2020.

Program and Schedule:

Date	Time	Instructor	Topic
13/6 (Mon)	10:00 -12:00	Áthila	Sampling Methods – In person class
15/6 (Wed)	14:00 - 18:00	Áthila	Sampling Methods - Virtual synchronous class
22/6 (Wed)	14:00 - 18:00	Áthila	Sampling Methods - Virtual synchronous class
23/6 (Thu)	10:00 -12:00	Áthila	Sampling Methods - Virtual synchronous class
29/6 (Wed)	14:00 - 18:00	Áthila	Seminars – In person class
30/6 (Thu)	10:00 -12:00	Áthila	Sampling Methods - Virtual synchronous class
5/7 (Tue)	10:00 -12:00	Áthila	Sampling Methods - Virtual synchronous class
6/7 (Wed)	All day	Áthila	Field trip for sampling <i>in situ</i> – In person class
7/7 (Thu)	10:00 -12:00	Áthila	Sampling Methods - Virtual synchronous class
13/7 (Wed)	All day	Áthila	Field trip for sampling <i>in situ</i> – In person class
18/7 (Mon)	9:00 – 12:00	Áthila	Results presentation from field activities – In person class

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, Huveneers 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.