FEDERAL UNIVERSITY OF SANTA CATARINA
CENTER FOR BIOLOGICAL SCIENCES
DEPARTMENT OF ECOLOGY AND ZOOLOGY
GRADUATE PROGRAM IN ECOLOGY

Code: ECO 3101000
Course name: Population Ecology
No. of Credits: 4 credits
Total Classroom Hours: 60 hours of theoretical-practical classes

Instructors responsible: Prof. Natalia Hanazaki (hanazaki@gmail.com), Prof. Nivaldo Peroni (peronin@gmail.com), Prof. Fábio Daura-Jorge (daurajorge@gmail.com).

Semester/Year: 01/2022.

Period:
Three concentrated modules: 09 to 13/05, 19 to 20/05 and 24 to 25/05.

Classes schedule: 08:00 a.m. to 12:00 noon and 2:00 p.m. to 6:00 p.m. (see detailed schedule)

Number of students: 20 (special students are accepted as long as they are already enrolled in a graduate program)

Place of the classes and communication systems: The face-to-face activities will take place in the classroom but can be alternated with online remote activities. The field activities on May 19 and 20 will be held in Imbituba and Laguna, respectively. Asynchronous communication can be done through messages sent via Moodle. Moodle's chat and forum can also be used for communication.

Student attendance: In person and online, by appointment with professors

Prerequisites: None

Syllabus: Evolutionary and systemic approaches in ecology. Main theories and models in population ecology. Distribution and abundance. Demography. Population growth and regulation. Population interactions. Ecological theories and biological conservation.

Teaching methodology:
The course will be carried out in a concentrated way in three modules, with classroom and field classes, synchronous and asynchronous activities will also be used and Moodle will be used as a support environment for teaching and learning and other online technological resources. The teachers will be responsible for preparing and making available the material, organizing the AVEA (Virtual Environment) and the assessment activities. Questions can be discussed via email or in the discussion forums. Attendance and participation in the activities and access to the posted weekly activities will also be used to count student attendance.

Evaluation method:
Assignment submission and participation in activities; seminars in pairs (review submission, presentation, and participation in discussion forums).

Legislation:
Is forbidden to record, photograph or copy the lessons made available on Moodle. Unauthorized use of original material taken from the classes constitutes counterfeiting - violation of copyright - according to Law 9610/98 - Copyright Law.

Program Content and Timeline:

Content and instructors	Date	Time	Mode
Presentation, introductory lesson, text discussion and distribution of seminars (Nivaldo and Natalia)	09/05	14-16h	In person
Exponential and logistic growth (Fábio)	10/05	8-12h	In person
Competition and predation dynamics (Fábio)	10/05	14-18h	In person
Estimation of Population parameter (Fábio)	11/05	8-12h	In person
Population viability analysis (Fábio)	11/05	14-18h	In person
Structured Populations (Nivaldo)	12/05	8-12h	In person
Metapopulations and field work preparation (Nivaldo)	13/05	8-12h	In person
Field work classes (Imbituba and Laguna)	19 e 20/05	Full time	In person
Seminars preparation (Nivaldo and Natalia)	24/05	8-12hs	asynchronous
Seminars presentation (Nivaldo and Natalia)	25/05	8-12hs	asynchronous

Literature:

According to UFSC Normative Resolution of July 21, 2020 Art.14, §2o, The main bibliography of the disciplines should be thought from the digital collection available in

the University Library, as a way to ensure access to students, or, in case of unavailability in those means, teachers should provide digital versions of the materials required at the time of presentation of the activity projects to departments and course colleges

Main Literature:

Articles on Population Ecology accessed via Portal Periódicos CAPES

Additional Literature:

- BEGON, M. & MORTIMER, M. 1990. Population ecology: A unified study of animals and plants. 2nd ed., Blackwell Scientific Publications, Oxford.
- GOTELLI, N.J. 2007. Ecologia. Londrina: editora Planta
- HANSKI, I. A. & Gilpin, M. E. 1997. Metapopulation biology: ecology, genetics, and evolution. Academic Press, San Diego-London.
- KREBS, C.J. 1989. Ecological methodology. Harper Collins Publishers New York.
- LUDWIG, J.A. & REYNOLDS, J.F. 1988. Statistical ecology: A primer on method and computing. John Wiley & Sons, New York.
- ROCKWOOD, L. L. 2006. Introduction to population ecology Malden: Blackwell