

Code: ECO 3101000

Course title: Population Ecology

Credits: 4 Total hours: 60 hours (theory and practice)

Professors:
Dra. Natalia Hanazaki
Dr. Nivaldo Peroni
Dr. Fábio Daura-Jorge
Dr. Mauricio Cantor

Semester/Year: 01/2020

Schedule:

08/06 08:00 – 12:00 and 14:00 – 16:00
09/06 08:00 – 12:00 and 14:00 -18:00
15/06 to 17/06 – 08:00 - 12:00 and 14:00 -18:00
19/06 to 20/06 – whole day (fieldwork)
22/06 to 24/06 - 08:00 - 12:00 and 14:00 -18:00

Number of students: 20

Lecture room: SIPG 08 (to be confirmed)

Office hours: Professors' offices, upon scheduling

Course prerequisites: none

Course description:

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 methods:

The course will be held in a semi-concentrated mode, with theoretical classes with discussion of papers and chapters, fieldwork for data collection and lab classes for data analysis; and presentation and discussion of seminars. We will use Moodle as a complementary environment to support teaching and learning.

Grading:

Class attendance, participation, reading and discussion of papers, delivery of tasks; seminars in pairs (30 minutes duration, on pre-defined topics. Deliver a summary of the seminar and make available the articles on which the seminar was based before its presentation); conducting seminar discussions.

Lecture topics:

08/06 08:00 – 12:00 and 14:00 – 16:00 - Presentation, introductory class, text discussion and seminar distribution (Nivaldo and Natalia)
09/06 08:00 – 12:00 and 14:00 -18:00 – reserved for seminar preparation. Flexible hours
15/06 – 08:00 - 12:00 - Exponential and logistical growth (Fábio and Mauricio)
15/06 – 14:00 -18:00 - Competition and predation dynamics (Fábio and Mauricio)
16/06 – 08:00 - 12:00 - Estimation of population parameters (Fábio and Mauricio)
16/06 – 14:00 -18:00 - Structured populations (Nivaldo)
17/06 – 08:00 - 12:00 - Population viability analysis (Fábio)
17/06 – 14:00 -18:00 - Metapopulations and preparation for fieldwork (Nivaldo)
19/06 to 20/06 – fieldwork: data collection
22/06 - 08:00 - 12:00 – Data analysis (Nivaldo)
22/06- 14:00 -18:00 - Data analysis (Mauricio)
23/06 - 08:00 - 12:00 - Data analysis (Fabio)
23/06 - 14:00 -18:00 - Seminars (Nivaldo and Natália)
24/06 - 08:00 - 12:00 - Seminars (Nivaldo and Natália)
24/06 - 14:00 -18:00 - Seminars (Nivaldo and Natália)

Suggested bibliography:

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- 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