Code: ECO 3300-000
Course name: Field Course in Ecology
Credits: 4 (120 class hours)
Professors: Dr Nivaldo Peroni**,** Dr Bárbara Segal Ramos and Dr Michele de Sá Dechoum

Guest professors: Professors from PPGECO/UFSC, PPGFAP/UFSC and UNIVILLE, and post doc researchers.
Collaborators – post docs: Dr. Thiago C. L. Silveira and Dr. Luis Macedo-Soares
Semester/Year: 02/2019
Period: August 19, and October 5-19, 2019
Schedule: August 19, 2 to 4 pm
October 5-19, all day
November 18, 8 to 12 am

Number of students: 20
Location: Centro de Estudos e Pesquisas Ambientais – CEPA – Vila da Glória, São Francisco do Sul – UNIVILLE

Office hours: during the course
Pre-requisite: Population Ecology, Community and Ecosystem Ecology

Syllabus
Field practices carried out in groups or individually under the supervision of experts (post docs or professors). The activities will cover theoretical background about sampling design, data collection and analysis, and lab experiments, as well as discussion of results, and oral and written presentation.

Methodology
The course will be held at the Center for Environmental Studies and Research (Centro de Estudos e Pesquisas Ambientais - CEPA), in Vila da Glória, São Francisco do Sul, Santa Catarina, Brazil. The CEPA has all the infrastructure necessary for the course, including lodging, kitchen, one lab, and a meeting room.
Short research projects will be developed at the CEPA and in nearby natural areas, covering freshwater, terrestrial, coastal and marine ecosystems. The course will be composed of three modules. One-day long projects suggested and supervised by post docs and/or professors will be carried out on the first and the second modules. The first

module will be focused on terrestrial ecosystems and the second module will be focused on freshwater, coastal and marine ecosystems. The students will develop projects in pairs in the third module of the course, under the guidance of a post doc/professor.
In the first two modules, each project will be developed in two days. On the first day, all data will be collected and analysed, and a first version of the article referent to the project will be presented at the end of the day. On the following day, each group will present the final version of the article. In the last module, the students will have four days to collect and analyse all the data collected, and write and present a first complete version of the article referent to their project. Lectures by guest professors are also part of the course.
We will have one preparatory class (August 19, 2-4pm) in order to establish students' groups which will be responsible for tasks regarding materials, references and other logistical aspects. In addition, a final class for the final presentation of the projects carried out in pairs is scheduled for November 18 or 25, 8-12am.

Assessment of students' performance

Students will be assessed according to their participation in the projects and the quality of the reports produced and presented at the end of each project. In addition, each student must do a final work, which should be carried out in pairs. All reports should be written in the format of a scientific paper.

Detailed schedule

August 19, 2-4pm (SIPG8) – Preparatory class
October 5 – Transfer to the Center for Environmental Studies and Research (CEPA – Vila da Glória, São Francisco do Sul, Santa Catarina, Brazil). Recognition of the study area and setting up of experiments
October 6-9 – Module 1 (projects focused on terrestrial ecossytems)
October 10-13 – Module 2 (projects focused on freshwater, coastal and marine ecosystems)
October 14 – Free day; 5pm: brainstorming and final project definition (students' groups, advisor, topic or main research questions)
October 15-18 – Module 3 (projects developed in pairs)
October 18 – Preliminary presentation of the last projects (Module 3)
October 19 – Transfer to Florianopolis/UFSC
November 18 (SIPG 8) – Final presentation of the last projects (Module 3)

References and links

BEGON, M. & MORTIMER, M. 1990. Population ecology: A unified study of animals and plants. 2nd ed., Blackwell Scientific Publications, Oxford.

BEGON, M., HARPER, J.L., TOWSEND, C.R. 1996. Ecology: Individuals, populations and communities. 3rd ed. London: Blackwell

BROWER, J. E., ZAE, J.H. & VON ENDE, C. N. 1997. Field and laboratory Methods for general Ecology. McGraw-Hill, Columbus.

HAIRSTON, N.G. 1991. Ecological experiments: Purpose, design and execution. Cambridge University Press, Cambridge.

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.

MAGURRAN, A. 2003. Measuring Biological Diversity. Blackwell, Oxford. -SCHRADER-FRECHETTE, K.S. & MCCOY, E.D. 1995. Method in ecology: Strategies for conservation. Cambridge University Press, Cambridge.

SOKAL, R.R. & ROHLF, F.J. 1995. Biometry: The principles and practice of statistics in biological research. 3rd.ed. W.H. Freeman and Company, New York.

VERHOEF, H.A. & MORIN, P.J. Community Ecology. 2010. Processes, Models and Applications. Oxford University Press.

ZAR, J.H. 19996. Biostatistical analysis. 4th.ed. Prentice-Hall International, Inc., London.