



Hands on Functional Diversity: from Ecological Indicators to Ecosystem Services

Lecturers/Organizers: Alice Nunes (Univ. Lisboa), Paula Matos (Univ. Lisboa), Laura Concostrina-Zubiri (Univ. Lisboa), Pedro Pinho (Univ. Lisboa), Margarida Santos-Reis (Univ. Lisboa), Cristina Branquinho (Univ. Lisboa).

Note: This course is intended to be presential, but if needed (e.g. due to COVID-19 security measures by the time of the course) it may be adapted to be given remotely

Date: January 11st-15th 2021

Duration: 36 hours

Schedule: 9:00-17:30; Lectures/Computer Lab – 4 days, Field trip – 1 day

Objectives:

Under the general framework of Global Change Ecology, the goal of this course is to provide the participants with the most recent and practical knowledge on the use of Functional Diversity. This includes the selection of functional traits and calculation of Functional Diversity Indexes. Examples of the application of this knowledge will be given regarding Ecological Indicators and Ecosystem Services.

The specific objectives are:

- To give a general overview on global change drivers and point out the needs of current and future studies on Ecology
- To synthesize the most useful methods and tools for Ecosystem Services assessment, focusing on Ecological Indicators
- To allow the participants to apply the acquired knowledge on case study data (participants' data or data provided by the organizers), using R software. Examples of calculation with other software will also be provided (e.g. PC-ORD)

PROGRAM

Monday

09:00-09:30 Registration (anfiteatro)

09:30-12:30 Ecological Indicators: background (anfiteatro)

Link to Ecosystem Services (anfiteatro)

12:30-13:30 Lunch

13:30-17:30 Personal project: presentation (anfiteatro)

Tuesday

09:00-12:30 Functional Diversity Indices: theory and methods (sala de computadores)

Database management (sala de computadores)

12:30-13:30 Lunch

13:30-17:30 Computer Lab – personal (sala de computadores)

Wednesday

09:00-12:30 Computer Lab – personal project (sala de computadores)

12:30-13:30 Lunch

13:30-17:30 Computer Lab – personal project (sala de computadores)

Thursday

09:00-18:30 Field trip at the "[Companhia das Lezírias](#)": application of concepts and methods

Friday

09:00-12.30 Case studies from cE3c (anfiteatro)

12:30-13:30 Lunch

13:30-17:00 Personal project: results and discussion (anfiteatro)

17:00-17:30 Closure (anfiteatro)

The registration fee includes: course materials, coffee breaks, transportation and insurance (if needed) for the field trip. Lunch is not included, but there are several low-price cafeterias in the campus.

Field trip: please, bring suitable clothes and shoes, lunch and water.

Address: Campo Grande, FCUL, Edifício C2, 1749-016 – Lisboa. FCUL is accessible by subway—“Cidade Universitária” or “Campo Grande” stations.

This course can have a recognition of 6 ECTs for FCUL PhD students enrolling in it as part of their first doctoral year. For students only requiring 5 ECTs recognized in their specific PhD programmes the last 6 hours of the course are not mandatory and the certificate will be on 'Topics in Hands on Functional Diversity'.

Nº (min, max) students: 10-15

Minimal formation of students: Bachelor in Biology, Natural Science or related areas

Directed to: MSc or PhD students in Biology, Environmental Sciences, Ecology or related areas, postdocs and professionals working in related topics.

Fee: free for 1st year PhD students in Doctoral programmes at FCUL (e.g. Biologia), Biodiversity, Genetics and Evolution (BIODIV UL; UP) and Biology and Ecology of Global Changes (BEAG UL, UA) when the course counts credits for their formation, in which case the delivery of a final report done after the course is mandatory; the course is also free for more advanced PhD students of the BIODIV programme (ULisboa or UPorto); 50 € for other PhD students from cE3c, 80 € for PhD students from institutions of the PEERS network (CFE-Coimbra); 125 € for FCUL Master students and unemployed; 180 € for BTI, BI and other PhD students; 250 € for Professional and postdocs.

When the maximum number of students is reached 8 vacancies will be available for non-paying 1st year PhD students mentioned above, being, by order of preference: 1) cE3c students; 2) BIODIV students (not from cE3c); 3) FCUL students (not from cE3c); 4) BEAG students (not from FCUL).

Deadline for applications: December 11st 2020

Candidates should send to Alice Nunes (amanunes@fc.ul.pt) a short CV and motivation letter explaining why they are interested in the course. The cv and letter should be named as *1st-lastNAME-CV.pdf* and *1st-lastNAME-ML.pdf* (that is personalize the name of each file with your first and last name).

In the email please add the following information:

Full Name:

E-mail:

Phone:

Professional activity: Professional/Postdoc, BTI, BI (or other non-post-doc research grant), PhD student (with/ without scholarship), Lic. (Bachelor)/Master student

PhD student of the 1st year of a Doctoral programme at FCUL, BIODIV (FCUL/FCUP), or BEAG (FCUL or UA)?

If yes to the above question, PhD student doing the Course to count credits for 1st year?:

PhD student of cE3c or CEF (Centro de Ecologia Funcional)?:

Name of the PhD programme: