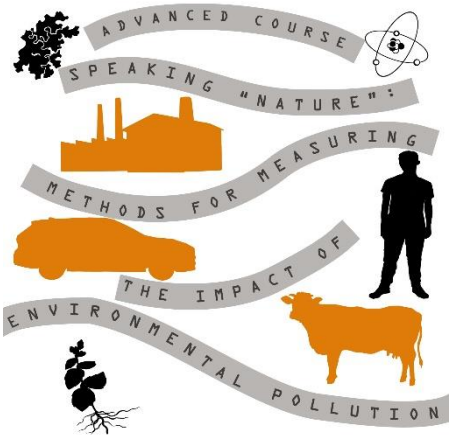

Speaking "nature": Methods for measuring the impact of environmental pollution on ecosystems

Lecturer(s) or Responsible(s): Silvana Munzi (cE3c, Univ. Lisboa), Pedro Pinho (cE3c, Univ. Lisboa), Sofia Augusto (ISPUP, Univ. Porto), Cristina Branquinho (cE3c, Univ. Lisboa), Cristina Máguas (cE3c, Univ. Lisboa), Alexandra Oliveira (cE3c, Univ. Lisboa), Helena Serrano (cE3c, Univ. Lisboa)

Calendar: July 10th- 14th 2023

Duration: 36 hours (contact hours)

Schedule: 9:00-18:30 everyday

Objectives: The course aims at enabling the participants to use different methods to measure the impacts of pollutants on ecosystems. Basic knowledge will be provided through theoretical and practical lessons on how to select and use the most suitable metrics based on the analysis of multiple compartments of the ecosystems.

General plan:

Environmental Pollution refers to the contamination of any component of an ecosystem causing adverse effects in its functioning. A widespread phenomenon in the Anthropocene, it impacts biodiversity, ecosystem functioning, and affects the ability of ecosystems to provide ecosystem services to humans. Besides, pollution also causes direct adverse effects on human health. Although the tools to measure pollutants concentration are increasingly well established, the tools available to measure the impacts of pollution on Ecosystems are far less known.

This course will train students on the use of tools to measure the impact of environmental pollution on ecosystems. These will include the use of ecological indicators based on biodiversity, physic and chemical measures and modelling, to measure the impact of atmospheric, water and soil pollution. Examples will be provided for natural, semi-natural and human-built ecosystems.

The course will be organized in lectures, lab experiences, computer analysis and, if possible, an excursion.

Participants have to be present at 85% of the contact hours (this means that they can miss one half-day), and actively participate in all activities.

This course can have a recognition of 6 ECTs for FCUL PhD students enrolling in it as part of their first doctoral year. These students need to deliver two reports after the course. For students only requiring 5 ECTs recognized in their specific PhD programmes the last 3.5 hours of the course are not mandatory, they need to deliver only the main report and the certificate will be on 'Methods for measuring the impact of environmental pollution on ecosystems'. Such report(s) are also advised for other students requesting creditation of the course in their institutions.

Nº (min, max) students: 10 – 20

Minimum formation: "Licenciatura" (bachelor) in Biology, Natural Science or related areas

Directed to: PhD or MSc students in Biology, Microbiology, Ecology, Environmental Studies or related areas, and postdocs and other 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), Biology and Ecology of Global Changes (BEAG UL, UA) and Sustainability Science (UL, several institutions), 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 more advanced PhD students of cE3c; 80 € for PhD students of the PEERS network (CFE); 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, 10 vacancies will be available for non-paying 1st year PhD students mentioned above, being, by order of preference students from: 1) cE3c; 2) BIODIV (not from cE3c); 3) FCUL (not from cE3c); 4) Sustainability Science (not from cE3c or FCUL); 5) BEAG (not from cE3c or FCUL).

Deadline for applications: June 9th 2023

How to apply

Candidates should fill in the following FORMULARY:

Closed

This formulary is strictly confidential, as explained in the introduction, and the data are required because the cE3c Advanced Courses are also offered as part of the PRR programme of FCUL.

When filling the formulary mind to:

1) FILL ALL THE MANDATORY FIELDS
2) UPLOAD CV AND MOTIVATION LETTER, both mandatory; use the names as instructed there
3) If you want to resume later SAVE the formulary, otherwise you will need to fill everything again
4) At the end SUBMIT the formulary before exiting

For any doubts please contact the cE3c coordinator of the cE3c courses Margarida Matos, email mmmatos@fc.ul.pt