UCLouvain

lboe2196

2026

Experimental design

2.00 credits	15.0 h + 22.5 h	Q1

Teacher(s)	Schtickzelle Nicolas ;
Language :	French
Place of the course	Louvain-la-Neuve
Learning outcomes	
Evaluation methods	The assessment will combine: • A part on the experimental design aspects of your LBOE2114 project, consisting of a group grade (10/20) based on a "before, during, and after" experimental design report and an individual grade (5/20) based on an oral interview on the student's personal understanding of the experimental design principles outlined in the group report. • A section (5/20) on general concepts of experimental design based on a written exam on Moodle. For students who do not have LBOE2114 jointly included in their PAE, the assessment remains the same but will be based on a group project on an experiment unrelated to LBOE2114. The written open-book exam consists of multiple-choice and/or open-ended questions. The exam is administered on Moodle, in a computer lab on campus. Unless otherwise stated in the exam instructions on Moodle, only the use of the UCLouvain computer in the computer room is authorized to access the exam and electronic documentation and the use of artificial intelligence is prohibited.
Teaching methods	This course is closely integrated with the "LBOE2114 Integrated Ecology Field Course" course, where students will have the opportunity to apply experimental design principles in groups to design and implement a field experiment aimed at answering an ecological question of their choice. It consists of theoretical lectures and joint LBOE2196+LBOE2114 practical sessions, where students will prepare their experimental design for implementation in the field. There will also be a few practical sessions not linked to LBOE2114. Students are encouraged to be interactive in all of these activities.
Content	With this course, students will master the key concepts of experimental design in order to best design experiments to answer a specific scientific question. It is structured around the following chapters: • Chapter 1 - The Scientific Approach • Chapter 2 - Question, Hypothesis(es), Predictions, and Experimental Approach • Chapter 3 - Measuring, Manipulating, and Controlling Variables • Chapter 4 - Defining the Sampling Plan • Chapter 5 - Some Experimental Designs
Inline resources	The visuals presented in the course are available on Moodle
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Biology of Organisms and Ecology	BOE2M	2		