



2.00 credits

30.0 h

Q1

Teacher(s)	Baeckens Simon ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	To follow this course, it is necessary to master the knowledge and skills developed in the courses LBIO1117 (Ecology I) et LBIO1223 (Molecular biology)
Main themes	In this advanced ecology course we cover aspects of individual and population ecology that are important in adaptation and evolution, such as ecophysiology, phenotypic plasticity, dispersal and life history variation.
Learning outcomes	
Evaluation methods	Assessment is based on a traditional written exam (in English) covering the material presented in the course. The exam evaluates both familiarity with the principles of functional ecology and the ability to apply a functional perspective and methodology to solve specific problems in evolutionary ecology.
Teaching methods	Lectures are delivered <i>ex cathedra</i> and complemented by interactive components, including class exercises, discussions, and guided reading.
Content	The course begins with an introduction to the breadth and diverse perspectives within the field of functional ecology. We then explore how morphological, physiological, and behavioral traits determine the ability of organisms to perform key functions essential for survival and reproduction. Topics include locomotion (on land, in water, and in the air), feeding and digestion, combat, regulation of water balance and temperature, communication, and mate acquisition. Alongside these functions, we examine the selective pressures that shape them, as well as how functional trade-offs and conflicts can constrain or even prevent adaptation. Through guided readings, discussions, and class exercises, we will explore how a functional ecological research approach—linking variation in organismal form to ecological performance and, ultimately, to fitness—helps us address questions about the adaptive value of phenotypic traits.
Inline resources	Slides of the lectures and PDFs of book chapters and papers from the peer-reviewed literature will be available on Moodle: LBIO1317 on Moodle
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Minor in Scientific Culture	MINCULTS	2		
Bachelor in Biology	BIOL1BA	2		
Bachelor in Biology, Anthropology and Archaeology	BABA1BA	2		