lbio1254 2024	Animal behavior

2.00 credits	20.0 h + 10.0 h	Q1

This biannual learning is being organized in 2024-2025

Teacher(s)	Evens Ruben (compensates Van Dyck Hans) ;Van Dyck Hans ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	Students should already be familiar with the concepts taught in the following courses: • LBIO1112 Biologie des organismes : plantes et animaux ; • LBIO1116 Démarche scientifique en biologie • LBIO1117 Ecologie I
Main themes	This course is for students who wish to discover or deepen their knowledge about animal behaviour. The diversity of animal behaviour is an inexhaustible source of fascination. First, we present this scientific field also called ethology, its concepts and methods. During the sessions, the students will address issues related to the use of space, the exploitation of food resources and the development of social interactions between individuals. Communication methods and functions will be discussed, as well as reproduction and parental behaviours. Students will also learn the importance of cognitive processes, including the mechanisms of learning, and the importance of personality in animal behaviour. The importance of different rhythms on behaviour will be highlighted by the study of chronobiology.
Learning outcomes	**At the end of this learning unit, the student is able to :** • Master the concepts and methods of ethology • Identify and describe animal behaviours • Understand the underlying neurophysiological mechanisms, including developmental aspects • Formulate testable hypotheses on the adaptive value of behaviours, and their evolution
Evaluation methods	There is one single written exam that requires knowledge from the theoretical and practical part of the course. Students will be expected to explain definitions and concepts as well as to answer insight/open questions to demonstrate their comprehensions of the course material.
Teaching methods	The course of Animal Behavior consists of two parts. The theoretical lectures consist of PowerPoint presentations that will be given in an interactive way. The practical course consists of a number of invited talks from scientists that perform various ways of animal behavior studies.
Content	The course will be divided into approximately nine topics: **History, Concepts, Ethology** General introduction to the development of modern-day research on animal behavior, natural selection and ethology **Innate & learned behavior.** Understanding the genetic basis of behavioral traits, and how animals adjust their behavior in response to the environment. **Survival Behavior (Habitat selection)** Understanding how animals choose where to live, understand the costs and benefits of migration and territoriality. **Survival Behavior (Predator avoidance)** Understanding the costs and benefits of performing anti-predator behavior. **Survival Behavior (Foraging behaviour)** Understanding optimal foraging behavior, game theory and general feeding behavior. **Communication** An introduction to the various ways animals send signals to each other, and how these signals are influenced by the environment and social context. **Reproduction** An introduction to the complexities of finding a mate, competing for mates and rearing offspring. **(Eu-)Social behavior** Understanding the costs and benefits of living in groups. **Chronobiology** An introduction to how light n earth influences animal behavior.

Inline resources	The presentations and literature will be uploaded on Moodle.
Bibliography	Manuel de support : Éthologie animale : Une approche biologique du comportement. Anne Sophie Darmaillacq, Frédéric Lévy- deboeck Ed. édition 2019. Alcock, John, 1942-. Animal Behavior: an Evolutionary Approach. Sunderland, Mass. : Sinauer Publishers, 2009.
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		🔍
Additionnal module in Biology	APPBIOL	2		🔍