

Module variant to: Foundations of Neurobiology and Behavior

Module: Neural basis of natural behavior				
University/Department/Teaching Unit: Freie Universität Berlin/Department of Biology, Chemistry, Pharmacy/Biology				
Module coordinator: Julio Hechavarria				
Prerequisites: none				
Learning objectives: The students will gain a solid perspective of the field Neuroethology (i.e. the study of the neural circuits that underlie natural behavior). They will be able to understand basic concepts of animal behavior and they will learn to plan and carry out scientific projects. In addition, they will have the opportunity to discuss ethical aspects of animal experiments as well as the relevance and challenges of animal-related work that seek to understand behavior in natural environments.				
Content: The module provides a broad overview of state-of-the-art topics in neuroethology and behavioral biology. We will discuss important concepts for neuroethology, such as the Krogh's principle for animal model selection, and link those concepts to classic work on animal behavior (i.e. Tinbergen's four questions). In the seminar, current trends and issues on neuroethology will be explored, presented, and critically discussed using original literature. In the practical sessions, these topics are applied through hands-on experience.				
Modes of instruction	Contact hours (hours per week during the semester)	Types of active participation	Workload (in hours)	
Seminar (S)	1	–	Class attendance (seminar) Preparation, before and after (seminar)	15 15
Practice sessions (Ü)	2	Carrying out and documenting experiments in the lab	Class attendance (practice session) Preparation, before and after (practice session)	30 15
			Exam preparation and exam	75
Module assessment		Written exam (60 minutes), wholly or partially in multiple-choice format; can also be carried out electronically or written report on research results (approx. 10 pages) or examination colloquium (approx. 20 minutes)		
Language		English		
Regular attendance required		yes		
Total workload		150 hours	5 credit points	
Duration		one semester		
Frequency		irregular		
Applicability		Master's degree program M.Sc. Biology		

Utilization in the following specializations (decision by the examining board):

Biodiversity, Evolution and Ecology	x
Genetics and Genomics	x
Microbiology	
Molecular- and Cellular Biology	x
Molecular Plant Sciences	
Neurobiology	x
Biology	x