

**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

**Predmet:** VEDENJE ŽIVALI  
**Course title:** ANIMAL BEHAVIOUR

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Okoljske in regionalne študije, doktorski študij 3. stopnje	Biodiverziteta in ekologija		
Environmental and Regional Studies, doctoral study 3 <sup>rd</sup> level	Biodiversity and ecology		

**Vrsta predmeta / Course type**

Izbirni/ Elective

**Univerzitetna koda predmeta / University course code:**

DIB04

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
30	15			15	120	6

**Nosilec predmeta / Lecturer:**

Izr. prof. dr. Simona Kralj-Fišer

**Jeziki /  
Languages:**

**Predavanja / Lectures:**

slovenščina, angleščina / Slovene, English

**Vaje / Tutorial:**

slovenščina, angleščina / Slovene, English

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

Opravljen prva ali druga stopnja študija biologije ali ekvivalentne smeri

**Prerequisite:**

Finished bachelors or masters degree in Biology or equivalent program of study

**Vsebina:**

- Zgodovina in uvod; proksimalni in distalni vplivi na vedenje
- Interakcija med proksimalnimi dejavniki (geni, živčevje, hormoni), vplivi okolja in vedenjem («nature in nurture»)
- Genetske osnove vedenja
- Živčevje, možgani in vedenje
- Hormoni in vedenje
- Metode v vedenjski biologiji
- Biologija agresivnega vedenja
- Biologija družabnega vedenja in altruizma
- Biologija razmnoževalnega vedenja
- Biologija starševskega vedenja

**Content (Syllabus outline):**

- History and introduction; proximate and ultimate causes of behaviour
- Interplay between proximate factors (genes, neural system and hormones), environment and behaviour; “nature and nurture”
- Behavioural genetics
- Behavioural neuroscience
- Behavioural endocrinology
- Methods in behavioural biology
- Biology of aggressive behaviour
- Biology of social behaviour and altruism
- Biology of reproductive behaviour
- Biology of parenting behaviour

- Individualne razlike v vedenju
- Evolucija vedenja
- Biologija človekovega vedenja

- Individual behavioural differences
- Evolution of behaviour
- Biology of human behaviour

**Temeljni literatura in viri / Readings:**

- Alcock, J. (2013). *Animal behavior: an evolutionary approach*. Sinauer Associates
- Martin, P., & Bateson, P. (2007). *Measuring Behaviour: An Introductory Guide*. Cambridge University Press
- Izbrani aktualni pregledni in izvirni raziskovalni članki iz revij

**Cilji in kompetence:**

Namen predmeta je seznaniti študente s koncepti študija vedenja, ki ga razumemo kot manifestacijo različnih proksimalnih in distalnih procesov. Predmet bo opredelil osnovne pojme, metode in raziskave na področju vedenjske biologije. Študente bo poučil o medsebojni interakciji med geni, živčevjem, hormoni in okoljem ter neločljivosti med vplivi genov in okolja na manifestacijo vedenja. Študentom bodo predstavljene vsebine, ki razlagajo, kako proksimalni in distalni dejavniki vplivajo na agresivno vedenje, socialno vedenje in altruizem, paritveno vedenje, spolne sisteme in strategije ter starševsko vedenje. Cilj predmeta je, da študente seznanijo z individualno variabilnostjo v vedenju, selekcijo in evolucijskimi spremembami v vedenju. Študentje bodo s sintezo pridobljenega znanja in primerjalnimi metodami dobili še vpogled/interpretacijo v vedenje človeka.

**Objectives and competences:**

The purpose of the course is to familiarize the students with the behavioural biology concepts explaining behaviour as a manifestation of different proximal and distal processes. The course will define basic concepts, methods and research topics in the field of behavioural biology. The course will present the interplay between genes, nervous system, hormones and environment, the factors having indivisible effects on the manifestation of behaviour. The course will introduce the topics that explain how proximal and distal factors affect aggressive behaviour, social behaviour and altruism, mating behaviour, sexual systems and strategies, and parental behaviour. The aim of this course is to familiarize the students with individual variability in behaviour, selection and evolutionary change in behaviour. Synthesis of the acquired knowledge and comparative methods will enable further insight / interpretation of human behaviour.

**Predvideni študijski rezultati:**

- Poznavanje metod in konceptov v vedenjski biologiji.
- Sposobnost interpretacije vedenja z različnih vidikov (geni, okolje, razvoj, evolucija).
- Poznavanje modernih raziskovalnih področij v vedenjski biologiji.

**Intended learning outcomes:**

- Knowledge of methods and concepts in behavioural biology.
- Ability to interpret behaviour from different perspectives (genes, environment, development, evolution).
- Knowledge of modern research topics in the field of behavioural biology.

**Metode poučevanja in učenja:**

- Predavanja
- Seminarji
- e-učenje

**Learning and teaching methods:**

- Lectures
- Seminars
- e-learning

Načini ocenjevanja:	Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt) <ul style="list-style-type: none"> <li>● Izpit</li> <li>● Seminarska naloga</li> </ul>	50 50	Type (examination, oral, coursework, project): <ul style="list-style-type: none"> <li>● Exam</li> <li>● Written paper</li> </ul>

**Reference nosilca / Lecturer's references:**

1. Kralj-Fišer, S., Čandek, K., Lokovšek, T., Čelik, T., Cheng, R. C., Elgar, M. A., & Kuntner, M. (2016). Mate choice and sexual size dimorphism, not personality, explain female aggression and sexual cannibalism in raft spiders. *Animal Behaviour*, 111, 49-55.
2. Kralj-Fišer, S., Hebets, E. A., & Kuntner, M. (2017). Different patterns of behavioral variation across and within species of spiders with differing degrees of urbanization. *Behavioral Ecology and Sociobiology*, 71(8), 125.
3. Kralj-Fišer, S., & Gregorič, M. (2019). Spider Welfare. In *The Welfare of Invertebrate Animals* (pp. 105-122). Springer, Cham.
4. Kralj-Fišer, S., Laskowski, K. L., & Garcia-Gonzalez, F. (2019). Sex differences in the genetic architecture of aggressiveness in a sexually dimorphic spider. *Ecology and evolution*, 9(18), 10758-10766.
5. Kralj-Fišer, S., Premate, E., Copilaș-Ciocianu, D., Volk, T., Fišer, Ž., Balázs, G., ... & Fišer, C. (2020). The interplay between habitat use, morphology and locomotion in subterranean crustaceans of the genus *Niphargus*. *Zoology*, 139, 125742.