



Univerza v Mariboru



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Fakulteta za naravoslovje in
matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Biologija živali
Course title:	Biology of Animals

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija in ekologija z naravovarstvom, 2. stopnja		1	1
Biology and Ecology with Nature Conservation, 2 nd Level		1	1

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
45			30		105	6

Nosilec predmeta / Lecturer:

Jeziki / Languages:	Predavanja / Lectures:	Slovenski/Slovenian
	Vaje / Tutorial:	Slovenski/Slovenian

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

Vsebina:

Primerjalni študij živali (nevretenčarji, vretenčarji):
 Koža.
 Mišičje, skelet in gibanje.
 Živčevje in čutila.
 Prebavila, prehrana in prebava.
 Izločala.
 Celom.
 Dihala.
 Krvožilje.
 Spolni organi in razmnoževanje.
 Evolucija: nevretenčarji (Protostomia, Deuterostomia), vretenčarji.

Content (Syllabus outline):

Comparative approach (invertebrates, vertebrates):
 Skin.
 Musculature, skeleton and movement.
 Nervous system and sensory system.
 Alimentary system, feeding and digestion.
 Excretory organs.
 Coelom.
 Respiratory organs.
 Circulatory system.
 Reproductive system and reproduction.
 Evolution: invertebrates (Protostomia, Deuterostomia), vertebrates.

Temeljni literatura in viri / Readings:

- Brusca R.C., Brusca G.J., 2003: Invertebrates. Sinauer, Sunderland.
- Kryštufek, B., 1991: Sesalci Slovenije. Prirodoslovni muzej Slovenije, Ljubljana.
- Kryštufek, B., Janžekovič, F., 1999: Ključ za določanje vretenčarjev Slovenije. DZS, Ljubljana.
- Liem, K. F., W. E. Bemis, W. F. Walker, L. Grande, 2001: Functional Anatomy of the Vertebrates. An Evolutionary Perspective. Harcourt College Publishers. Orlando.
- Nielsen C. 2001: Animal Evolution. Interrelationships of the Living Phyla. 2nd Edition. Oxford University Press, New York.
- Pough F.H., C. M. Janis, J. B. Heiser, 2005: Vertebrate Life. Pearson Education International. New Jersey.
- Ruppert E.E., Fox R.S., Barnes R.D., 2004: Invertebrate Zoology. A functional evolutionary approach. Seventh edition. Thomson, Victoria, Toronto, London.
- Vaughan, T.A., J.M. Ryan, N.J. Czaplewski, 2000: Mammalogy. Thomson Learning. London.

Cilji in kompetence:

- Razumevanje gradbenega plana glavnih debel nevretenčarjev in razredov vretenčarjev
- Razumevanje odnosov med obliko, funkcijo in adaptivno radiacijo
- Poznavanje odnosa med evolucijo in morfologijo ter načinom življenja
- Poznavanje metod in tehnik v zoologiji

Objectives and competences:

- Understanding the »bauplan« of the invertebrate phyla and classes of vertebrates
- Understanding relationships among form, function and adaptive radiation
- Understanding relationship between evolution, morphology and environment
- Knowledge of methods and techniques in zoology

Predvideni študijski rezultati:

- Znanje in razumevanje:
- Povezave med organizacijo živalskega telesa in njegovim okoljem
 - Biodiverzitete živali na regionalnem in svetovnem nivoju
 - Metode in tehnike dela v zoologiji
 - Poznavanje naravovarstvene problematike živali
 - Sposobnost načrtovanja in izvedbe opazovanj in eksperimentov na živalih
 - Sposobnost načrtovanja in upravljanja s populacijami vretenčarjev

Intended learning outcomes:

- Knowledge and understanding:
- Relations between animal body organization and the environment
 - Knowledge of animal biodiversity at the regional and global level
 - Understanding methods and technics of study of animals
 - Knowledge of the conservation topics
 - Ability to arrange observations and experiments with animals
 - Ability to arrange observations and managing with populations of vertebrates

Metode poučevanja in učenja:

- Predavanja
- Laboratorijske vaje in individualno eksperimentalno delo

Learning and teaching methods:

- Lectures
- Laboratory exercises and individual experimental practice

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)	Delež (v %) / Weight (in %)	Type (examination, oral, coursework, project):
<ul style="list-style-type: none"> • Seminaraska naloga • Pisni izpit 	50	<ul style="list-style-type: none"> • Seminar essay • Written exam
	50	

Reference nosilca / Lecturer's references:

- DEVETAK, Dušan, NOVAK, Tone, JANŽEKOVIČ, Franc. Effect of substrate density on behaviour of antlion larvae (Neuroptera: Myrmeleontidae). *Acta oecologica*. [Print ed.], 2012, vol. 43, str. 1-7.
- KRYŠTUFEK, Boris, KLENOVŠEK, Tina, VARLIJEN BUŽAN, Elena, LOY, Anna, JANŽEKOVIČ, Franc. Cranial divergence among evolutionary lineages of Martino's vole, *Dinaromys bogdanovi*, a rare Balkan paleoendemic rodent. *J. mammal.*, 2012, vol. 93, iss. 3, str. 818-825.
- LIPOVŠEK DELAKORDA, Saška, NOVAK, Tone, JANŽEKOVIČ, Franc, PABST, Maria Anna. Role of the fat body in the cave crickets *Troglophilus cavicola* and *Troglophilus neglectus* (Rhaphidophoridae, Saltatoria) during overwintering. *Arthropod struct. develop.*, 2011, vol. 40, no. 1, str. 54-63.
- KRYŠTUFEK, Boris, JANŽEKOVIČ, Franc, REŽEK DONEV, Nataša. Elevational diversity of reptiles on two Dinaric mountains. *J. Nat. Hist.*, Feb. 2008, vol. 42, no. 5/8, str. 399-408.