



Univerza v Mariboru

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 cycle	/	1	1

Vrsta predmeta / Course type

Obvezni / Compulsory

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
45		30			105	6

Nosilec predmeta / Lecturer:

Franc JANŽEKOVIČ

Jeziki /

Predavanja / Lectures: Slovenščina / Slovene

Languages:

Vaje / Tutorial: Slovenščina / Slovene

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

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Prerequisites:

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Vsebina:

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

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.

Spolni organi in razmnoževanje.
Evolucija živali.
Ravnanje z laboratorijskimi živalmi in njihovo gojenje.
Naravoslovne zbirke: evidence, zakonodaja, izdelava zbirk, hranjenje in vzdrževanje zbirk.

Reproductive system and reproduction.
Evolution of animals.
Handling and inbred of laboratory animals.
Natural collections: records, legislation, creation of collections, storage and maintenance of collections.

Temeljna literatura in viri / Readings:

- Brusca R.C., Brusca G.J., (2003 in novejši izdaji) Invertebrates. Sinauer, Sunderland.
- Liem, K. F., W. E. Bemis, W. F. Walker, L. Grande, (2001 in novejši izdaji). Functional Anatomy of the Vertebrates. An Evolutionary Perspective. Harcourt College Publishers. Orlando.

Cilji in kompetence:

Razumevanje gradbenega plana glavnih debel nevretenčarjev in razredov vretenčarjev.

Sposobnost interpretacije odnosa med obliko, funkcijo in adaptivno radiacijo.

Poznavanje taksonomske pripadnosti in telesne zgradbe izbranih skupin živali.

Samostojna determinacija živali do nivoja družin oz. redov.

Sposobnost laboratorijskega gojenja izbranih skupin živali.

Uporaba metod in tehnik v zoološkem delu.

Objectives and competences:

Understanding the »bauplan« of the invertebrate phyla and classes of vertebrates.

Ability to interpret the relationship between form, function, and adaptive radiation.

Knowledge of the taxonomic affiliation and body structure of selected groups of organisms.

Independent determination of animals to the level of families or orders.

Ability of laboratory inbred of selected groups of animals.

Using methods and techniques in zoology.

Predvideni študijski rezultati:

Po opravljenem kurzu naj bi bili študentje sposobni:

Razložiti vlogo adaptacij, ki so pripeljale do raznolikosti telesne zgradbe in različnih življenjskih strategij živali.

Razložiti povezavo med organizacijo živalskega telesa in njegovim okoljem.

Razložiti biodiverzitetu živali na regionalnem in svetovnem nivoju.

Uporabljati različne metode in tehnike v zoološkem delu.

Gojiti izbrane skupine laboratorijskih živali.

Voditi naravoslovno zbirko živali s pripadajočo informatiko.

Intended learning outcomes:

After the accomplished course the students should be able to:

To explain the role of adaptations that have led to the diversity of the body structure and various life strategies of animals.

To explain the connection between the organization of the animal body and its environment.

Explain the biodiversity of animals at the regional and global level.

Use different methods and techniques in zoology.

Inbred selected groups of laboratory animals.

<p>Načrtovati in izvajati eksperimente in meritve na živalih.</p> <p>Sodelovati pri načrtovanju monitoringa in upravljanju z izbranimi skupinami živali.</p>	<p>Keep a collection of animals with related informatics.</p> <p>Plan and perform experiments and measurements on animals.</p> <p>Participate in the planning of monitoring and management of selected groups of animals.</p>
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Metode poučevanja in učenja:

<ul style="list-style-type: none"> - Predavanja - Laboratorijske vaje in individualno eksperimentalno delo
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Learning and teaching methods:

<ul style="list-style-type: none"> - 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):
- Seminarska naloga	50	- Seminar essay
- Pisni izpit	50	- Written exam

Reference nosilca / Lecturer's references:

KRYŠTUFEK, Boris, STANCIU, Cătălin-Răzvan, IVAJNŠIČ, Danijel, CHERKAOUI, Sidi Imad, JANŽEKOVIČ, Franc. Facts and misconceptions on the Palaeartic existence of the striped ground squirrel. *Mammalia : morphologie, biologie, systematique des mammiferes*, ISSN 0025-1461, 2018, vol. 82, iss. 3, str. 248-255.

KRYŠTUFEK B, JANŽEKOVIČ F, HUTTERER R, KLENOVŠEK T. 2017 Morphological evolution of the skull in closely related bandicoot rats : a comparative study using geometric morphometrics. *Hystrix : the italian journal of mammalogy*, 27 (2): 1-7.

BAVDEK, Srdan V., GOLOB, Zlatko, JANŽEKOVIČ, Franc, RUTLAND, C, KUBALE, Valentina. Skull of the grey heron (*Ardea cinerea*): Detailed investigation of the orbital region. *Anatomia, Histologia, Embryologia*, ISSN 0340-2096. [Print ed.], 2017, vol. 46, no. 1, str. 552-557.

JANŽEKOVIČ, Franc, ZAJC, Tina, BAVDEK, Srdan V., GOLOB, Zlatko, KLENOVŠEK, Tina. Prispevek k slovenski anatomski terminologiji : latinsko - slovenski, slovensko - latinski slovar ptičjih kosti = Contribution to Slovenian anatomical terminology : Latin - Slovenian, Slovenian - Latin dictionary of bird bones. *Acta biologica slovenica : ABS*, ISSN 1408-3671. [Tiskana izd.], 2015, vol. 58, št. 2, str. 77-92.