



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Sistematika in filogenija nevretenčarjev
Course title:	Systematics and Phylogeny of Invertebrates

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Academic year	Semester Semester
Univerzitetni študijski program Biologija, 1. stopnja	/	2.	3.
Undergraduate university programme Biology, 1 st cycle	/	2.	3 rd

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Lab. vaje Laboratory work	Terenske vaje Field work	Samost. delo Individ. work	ECTS
45			30	15	120	7

Nosilec predmeta / Lecturer:

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

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

Jih ni.

Prerequisites:

None.

Vsebina:

- Principi živalske sistematike
- Protozoa, praživali
- Porifera, spužve. Placozoa, plakozoji
- Cnidaria, ožigalkarji. Ctenophora, rebrače
- Plathelminthes, ploskavci. Mesozoa.
- "Aschelminthes": Cycloneuralia and Gnathifera
- Mollusca, mehkužci
- Nemertea, nitkarji
- Annelida, kolobarniki. Echiurida, zvezdaši
- Arthropoda, členonožci: Trilobitomorpha, Chelicerata, Mandibulata (Crustacea, Myriapoda, Hexapoda)
- Lophophorata, lofoforati.
- Chaetognatha, ščetinočeljustnice
- Hemichordata, polstrunarji. Chordata, strunarji
- Echinodermata, iglokožci
- Evolucija nevretenčarjev

Content (Syllabus outline):

- Coping with animal diversity
- Protozoa
- Porifera and Placozoa
- Cnidaria and Ctenophora
- Plathelminthes.Mesozoa
- "Aschelminthes": Cycloneuralia and Gnathifera
- Mollusca
- Nemertea
- Annelida. Echiurida.
- Arthropoda: Trilobitomorpha, Chelicerata, Mandibulata (Crustacea, Myriapoda, Hexapoda)
- Lophophorata
- Chaetognatha
- Hemichordata and Chordata
- Echinodermata
- Patterns of Invertebrate Evolution

Temeljni literatura in viri / Readings:**Temeljni viri/ Basic literature:**

Brusca, R. C., W. Moore, S. M. Shuster, 2016: Invertebrates. 3rd. ed. Sinauer, Sunderland

Devetak, D., Klokočovnik, V. 2013: Praktikum iz zoologije nevretenčarjev. Fakulteta zanaravoslovje in matematiko. Maribor.

Priporočena literatura / Recommended:

Sket, B., M. Gogala, V. Kuštor, 2003: Živalstvo Slovenije. Tehniška založba, Ljubljana

Nielsen, C. 2012: Animal evolution : interrelationships of the living phyla. Oxford University Press, Oxford.

Cilji in kompetence:

- Predstaviti temeljne skupine nevretenčarjev
- Podati povezavo med gradbenim planom in načinom življenja
- Predstaviti raznolikost in kompleksnost nevretenčarjev
- Podati evolucijski pristop pri študiju nevretenčarjev

Objectives and competences:

- To present fundamental invertebrate groups
- To give the relations between animal "Bauplan" and its environment
- To present diversity and complexity of Animal Kingdom
- To give an evolutionary approach in the study of invertebrates

Predvideni študijski rezultati:

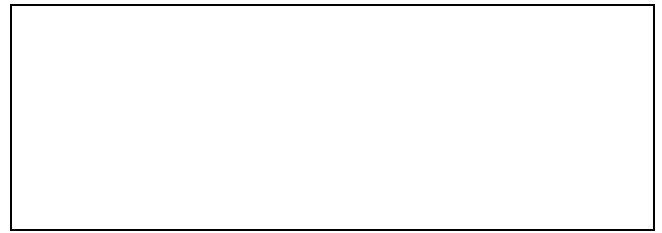
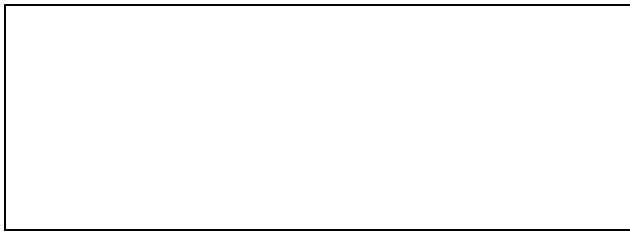
Po uspešno opravljeni učni enoti naj bi bili študenti zmožni:

- opisati, primerjati in razlikovati predstavnike glavnih debel nevretenčarjev;
- prepoznati nevretenčarje do nivoja redov in definirati njihove diagnostične značilnosti;
- opredeliti in zagovarjati glavne evolucijske trende pri deblih nevretenčarjev.

Intended learning outcomes:

By the end of this course students should be able to:

- describe, discriminate and compare traits of the invertebrate phyla;
- identify invertebrates to the order level and define their diagnostic traits;
- define and justify main evolutionary trends in the invertebrate phyla.

**Metode poučevanja in učenja:**

- Predavanja
- Laboratorijske vaje – individualno eksperimentalno delo
- Terensko delo

Learning and teaching methods:

- Lectures
- Laboratory exercises –individual experimental practice
- Field work

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

<ul style="list-style-type: none">● Kolokvij iz vaj● Pisni izpit <p>Pozitivno opravljen kolokvij iz laboratorijskih vaj je pogoj za pristop k izpitu.</p>	50 50	<ul style="list-style-type: none">● Examination of exercises● Written examination <p>Positive result of the exercise examination is a prerequisite for the written examination.</p>
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Reference nosilca / Lecturer's references:

PODLESNIK, Jan, KLOKOČOVNIK, Vesna, KLENOVŠEK, Tina, JANŽEKOVIČ, Franc, DEVETAK, Dušan. First records of spongillaflyies (Neuroptera: Sisyridae) in Serbia and Bosnia and Herzegovina, with notes on their occurrence in the Balkan countries. Turkish journal of zoology, ISSN 1300-0179, 2017, vol. 41, iss. 1, str. 164-169, ilustr., doi:10.3906/zoo-1508-48. [COBISS.SI-ID22917640]

KLOKOČOVNIK, Vesna, PODLESNIK, Jan, DEVETAK, Dušan. Occurrence of the antlion tribe Acanthaclisini in the Balkan Peninsula : (Neuroptera, Myrmeleontidae). Spixiana : Zeitschrift für Zoologie. 2016, bd. 39, h. 1, str. 99-104, ilustr. ISSN 0341-8391. [COBISS.SI-ID 22594568]

KLOKOČOVNIK, Vesna, VELER, Eva, DEVETAK, Dušan. Antlions in interaction : confrontation of two competitors in limited space. Israel journal of ecology & evolution. 2020, vol. 66, iss. 1/2, str. 73-81, ilustr. ISSN 1565-9801. DOI: 10.1163/22244662-20191058. [COBISS.SI-ID 24894216]financer: ARRS, Programi, P1-0403 (A), SI, Računsko intenzivni kompleksni sistemi

KLOKOČOVNIK, Vesna, ŠORGO, Andrej, DEVETAK, Dušan. Hands-on experiments on predatory behaviour with antlion larvae. Journal of biological education. 2016, vol. 50, no. 4, str. 384-394, ilustr. ISSN 0021-9266. DOI: 10.1080/00219266.2015.1117513. [COBISS.SI-ID 219282]

PODLESNIK, Jan, KLOKOČOVNIK, Vesna, KLENOVŠEK, Tina, DEVETAK, Dušan. Distribution of Suarius nanus (McLachlan, 1893) (Neuroptera: Chrysopidae) on the Balkan Peninsula. Acta zoologica bulgarica. 2016, vol. 68, no. 3, str. 339-342, ilustr. ISSN 0324-0770. <http://www.acta->

zoologica-bulgarica.eu/downloads/acta-zoologica-bulgarica/2016/68-3-339-342.pdf. [COBISS.SI-ID 22690312]