Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	**Izbrana poglavja iz arahnologije**
Course title:	**Selected Topics in Arachnology**

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Doktorski študij Ekološke znanosti, 3. stopnja		**1. ali 2.; 1st or 2nd**	**1. 2. ali 3. ; 1st, 2nd or 3rd**
Doctoral Study Ecological Sciences, 3rd degree			

Vrsta predmeta / Course type	Izbirni/Elective
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
5				**5**	**140**	**5**

Nosilec predmeta / Lecturer:	Tone NOVAK

Jeziki / Languages:	**Predavanja / Lectures:**	slovenski / slovene
	Vaje / Tutorial:	slovenski / slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Poznavanje pajkovcev na ravni univerzitetnega programa ter clenonožcev na ravni drugostopenjskega študija	Knowledge of arachnids at graduate level, and of arthropods at master level

Vsebina:	**Content (Syllabus outline):**
Pajkovci (Arachnida) so druga najvecja skupina clenonožcev z znacilno telesno zgradbo: eno- ali dvoclenskim trupom, dvema paroma pipalk ter štirimi pari nog. Arahnologija obsega pregled skupine po posameznih poglavjih. Kratkemu taksonomskemu in anatomskemu pregledu sledijo poglavja o lokomociji, prehrani in razmnoževanju. Scorpiones, Shizomida, Uropygi, Amblypygi, Araneae, Palpigradi, Solifugae, Pseudoscorpiones, Ricinulei, Acari, Opiliones. Stnjeno je predstavljena filogenija pajkovcev. Poudarek je na obravnavi ekoloških znacilnosti skupin ter izbranih konkretnih ekoloških problemih. Podan je pregled skupin pajkovcev v svetu in Sloveniji. Predmet je zasnovan	The arachnids (Arachnida) are the second major articulata group having a typical habitus: a body consisting of one or two main parts, chelicerae, palps and four pairs of legs. The study involves an overview of the group by the following chapters. The overview starts with a short taxonomical and anatomical explanation, followed by the chapters on locomotion, nourishment and reproduction. Scorpiones, Shizomida, Uropygi, Amblypygi, Araneae, Palpigradi, Solifugae, Pseudoscorpiones, Ricinulei, Acari, Opiliones. Short introductory presentation of arachnid phylogeny is made.

prilagodljivo glede na konkretne interese študentov v zvezi z biologijo in ekologijo posameznih skupin pajkovcev.	Ecological characteristics of arachnid groups, and selected ecological problems are discussed. An overview of the arachnid groups in the world and in Slovenia is presented. The course is focused on the arachnid group groups and special aspects of their biology and ecology with respect to the student interest.

Temeljni literatura in viri / Readings:

• Fet, V., P. A. Selden (eds.), 2001: Scorpions 2001. In Memoriam Gary A. Polis. Burnham Beeches, Bucks, British Arachnological Society.
• Foelix, R. F., 1996: Biology of spiders. Oxford University Press & Georg Thieme Verlag.
• Hillyard, P. D., J. H. P. Sankey, 2005: Harvestmen (Opiliones). Synopses of the British Fauna 4. Mus. Nat.-hist. London.
• Pinto-da-Rocha, R., G. Machado, G. Giribet, 2007: Harvestman: The Biology of Opiliones. Harvard University Press, Cambridge, MA.
• Thaler, K. (ed.), 2005: Diversität und Biologie von Webspinnen, Skorpionen und anderen Spinnentieren. Denisia 12.
• Weygoldt, P. 1969: Biology of Pseudoscorpions. Harward University Press.
• Izbrani clanki iz revij/Selected articles from the journals Journal of Arachnology, Acarologia itd./etc.

Cilji in kompetence:	**Objectives and competences:**
• Študenti se poglobijo v biologijo in ekologijo izbranih pajkovcev	• Students get inside the biology and ecology of selected arachnids

Predvideni študijski rezultati:	**Intended learning outcomes:**
Znanje in razumevanje: • Študenti dobijo podrobno znanje o izbranih skupinah pajkovcev v svetu in v Sloveniji • Študenti se seznanijo z aktualnimi znanstvenimi problemi, ki se nanašajo na pajkovce, v svetu in pri nas • Študenti izdelajo podroben nacrt raziskave izbranega odprtega problema na podrocju arahnologije Prenesljive/kljucne spretnosti in drugi atributi: • Študenti se usposobijo za vrhunsko nacrtovanje raziskav izbranih odprtih vprašanj na podrocju arahnologije	Knowledge and Understanding: • Students get advanced knowledge about selected arachnid groups in the World and in Slovenia • Students capture the actual scientific problems concerning arachnids in the World and in Slovenia • Students produce a advanced investigation plan of a selected open problem in the field of aracnology Transferable/Key Skills and other attrib utes: • Students get skills of top-level planning research studies in selected open problems in arachnology

Metode poučevanja in učenja:	Learning and teaching methods:
• Predavanja • Seminar • Terenske vaje • Individualno delo	• Lectures • Seminar • Field work • Individual work

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
• Seminarska naloga • Ustni izpit	50% 50%	• Seminar essay • Oral exam

Reference nosilca / Lecturer's references:

NOVAK, Tone, PERC, Matjaž, LIPOVŠEK DELAKORDA, Saška, JANŽEKOVIČ, Franc. Duality of terrestrial subterranean fauna. International journal of speleology, ISSN 0392-6672, 2012, vol. 41, no. 2, str. 181-188, doi: 10.5038/1827-806X.41.2.5. [COBISS.SI-ID 19061512]

NOVAK, Tone, JANŽEKOVIČ, Franc, LIPOVŠEK DELAKORDA, Saška. Contribution of non-troglobiotic terrestrial invertebrates to carbon input in hypogean habitats = Prispevek prezimujočih netroglobiontskih kopenskih nevretenčarjev k vnosu ogljika v podzemeljske habitate. Acta carsologica, ISSN 0583-6050, 2013, letn. 42, št. 2/3, str. 301-309, tabele. http://ojs.zrc-sazu.si/carsologica/article/view/669/600, doi: 10.3986/ac.v42i2-3.669. [COBISS.SI-ID 20238600]

LIPOVŠEK DELAKORDA, Saška, JANŽEKOVIČ, Franc, NOVAK, Tone. Autophagic activity in the midgut gland of the overwintering harvestmen Gyas annulatus (Phalangiidae, Opiliones). Arthropod structure & development, ISSN 1467-8039, 2014, str. 1-8, ilustr., doi: 10.1016/j.asd.2014.06.001. [COBISS.SI-ID 20696584]

NOVAK, Tone, ŠAJNA, Nina, ANTOLINC, Estera, LIPOVŠEK DELAKORDA, Saška, DEVETAK, Dušan, JANŽEKOVIČ, Franc. Cold tolerance in terrestrial invertebrates inhabiting subterranean habitats. International journal of speleology, ISSN 0392-6672, 2014, vol. 43, no. 3, str. r39-r46. http://dx.doi.org/10.5038/1827-806X.43.3.3, doi: 10.5038/1827-806X.43.3.3. [COBISS.SI-ID 20595208]

NOVAK, Tone, KOZEL, Peter. Hadzinia ferrani, sp. n. (Opiliones: Nemastomatidae), a highly specialized troglobiotic harvestman from Slovenia. Zootaxa, ISSN 1175-5326, 2014, vol. 3841, no. 1, str. 135-145, ilustr. http://biotaxa.org/Zootaxa/article/view/zootaxa.3841.1.8, doi: 10.11646/zootaxa.3841.1.8. [COBISS.SI-ID 37430317]