Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

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

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:	Franc Janžekovič

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

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

Vsebina:	**Content (Syllabus outline):**
Tradicionalna in geometrijska morfometrija. Velikost vzorca in spremenljivke. Teorija velikosti in oblike. Analiza velikosti. Analiza oblike. Razmerje med ontogenijo in filogenijo. Morfometrija in sistematika.	Traditional and geometric morphometrics. Sample size and variables. Theory of size and shape. Analyzing of size. Analyzing of shape. Relationship between ontogeny and phylogeny. Morphometrics and systematics.

Temeljni literatura in viri / Readings:

Zelditch M.L., Swiderski D.L., Sheets H.D., Fink W.L. 2004. Geometric Morphometrics for Biologists: a primer. Elsevier. Amsterdam.
Sokal R.R., F.J. Rohlf, 2014. Biometry: the principles and practice of statistics in biological research. W.H. Freeman and com. San Francisco.

Cilji in kompetence:	**Objectives and competences:**
Načrtovanje, izvedba meritev, analiza in interpretacijo rezultatov morfometričnih analiz. Napredna obravnava statističnih analiz na biometričnih podatkih.	Skills to plan and conduct morphometric measurements, data analysing and interpretation of results. Advanced knowledge of statistical analysis of the biometrical data.

Predvideni študijski rezultati:	**Intended learning outcomes:**
Znanje in razumevanje: Znajo načrtovati, izvesti in vrednotiti biometrične raziskave. **Prenesljive/ključne spretnosti in drugi atributi:** Sposobnost načrtovanja in izvedbe najzahtevnejših biometričnih meritev. Sposobnost analize in interpretacije najzahtevnejših biometričnih raziskav.	**Knowledge and understanding:** Skills to plan and conduct morphometric measurements, data analysing and interpretation of results. **Transferable/Key Skills and other attributes:** Ability to investigate scientifically experiments with biometrical methodology. Ability to analyse and interpretation of morphometrical investigations.

Metode poučevanja in učenja:	**Learning and teaching methods:**
Predavanje Seminar	Lectures Seminar

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

Reference nosilca / Lecturer's references:

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]

LIPOVŠEK DELAKORDA, Saška, **JANŽEKOVIČ, Franc**, LEITINGER, Gerd, RUPNIK, Marjan. Rab3a

ablation related changes in morphology of secretory vesicles in major endocrine pancreatic cells, pituitary melanotroph cells and adrenal gland chromaffin cells in mice. *General and comparative endocrinology*, ISSN 0016-6480, 2013, vol. 185, str. 67-79. http://dx.doi.org/10.1016/j.ygcen.2013.01.007. [COBISS.SI-ID 19733768]

KRYŠTUFEK, Boris, KLENOVŠEK, Tina, VARLJEN BUŽAN, Elena, LOY, Anna, **JANŽEKOVIČ, Franc**. Cranial divergence among evolutionary lineages of Martino's vole, Dinaromys bogdanovi, a rare Balkan paleoendemic rodent. *Journal of mammalogy*, ISSN 0022-2372, 2012, vol. 93, iss. 3, str. 818-825, doi: 10.1644/11-MAMM-A-260.2. [COBISS.SI-ID 19312904]

JANŽEKOVIČ, Franc, KRYŠTUFEK, Boris. Geometric morphometry of the upper molars in European wood mice Apodemus. *Folia Zoologica*, ISSN 0139-7893 0139-7893, 2004, let. 53, št. 1, str. 47-55, ilustr. [COBISS.SI-ID 681939]