



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Biodiverzitetni vzorci in procesi
Course title:	Biodiversity patterns and processes

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.- 4.; 1st-4th
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
10	10	10			150	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:

Prerequisites:

Vsebina:

Obravnavana so izbrana poglavja iz naslednjih sklopov:
Razprava o biodiverziteti v globalnem merilu: temelji ekološkega in evolucijskega ozadja.
Abundanca, redkosti in izumrtje.
Izguba habitatov, njihova degradacija in fragmentacija.
Zbiranje biodiverzitetnih podatkov, njihova organizacija v podatkovne nize in podatkovne zbirke.

Content (Syllabus outline):

Selected topics in the following chapters are discussed.
Discussion on biodiversity on global scale: ecological and evolution background.
Abundance, rarity, extinctions.
Habitat loss, their degradation and fragmentation.
Collecting biodiversity data, their organization in database collections.
Procedures for calculating and evaluating

Postopki izračunavanja in vrednotenja taksonomske, funkcionalne in filogenetske diverzitete, analiza biodiverzitetnih vzorcev.

Konvencija o biodiverziteti.

taxonomic, functional and phylogenetic diversity, analysis of biodiversity patterns.

Convention on biological diversity.

Temeljni literatura in viri / Readings:

Temeljna literatura:

Legendre, P., Legendre L. (2012). Numerical Ecology. Elsevier.

Dodatna literatura:

JANŽEKOVICH, F. (2023). Makroekologija : analiza biodiverzitetnih podatkov. Univerza v Mariboru.

Scheiner. M.S. (2024). Encyclopedia of biodiversity. Academic Press.

Cilji in kompetence:

Podrobno razumejo izbrane ekološke in evolucijske vsebine biodiverzitete. Podrobno se seznanijo z naravnimi (abundanca, redkosti, izumrtje) in antropogenimi (izguba, degradacija, fragmentacija habitatov, globalne klimatske spremembe) gonilnimi silami biodiverzitete. Zbiranje in organizacija podatkov o biodiverziteti.

Uporaba izbranih metod in postopkov za vrednotenje biodiverzitete na vrstnem in ekosistemskem nivoju.

Uporaba računalniških orodij za zbiranje in obdelavo biodiverzitetnih podatkov.

Objectives and competences:

Advanced knowledge about selected ecological and evolutionary chapters of biodiversity. Advanced knowledge of natural (abundance, rarity, extinction) and anthropogenic (habitat loss, degradation, fragmentation, global climate change) driving forces of biodiversity.

Collecting and organizing selected data on biodiversity.

Use of selected methods and procedures for evaluation of biodiversity on species and ecosystem level.

Use of software for collecting and processing biodiversity data.

Predvideni študijski rezultati:

Znanje in razumevanje:

Poglobljeno razumevanje naravne in antropogene gonilne sile biodiverzitete.

Intended learning outcomes:

Knowledge and understanding:

Advanced understanding knowledge about natural and anthropogenic driving forces of biodiversity.

Prenesljive/ključne spretnosti in drugi atributi: Študentje usvojijo kreativno znanje o globalnih vzorcih in procesih biodiverzitete. Skozi poznavanje mednarodnih konvencij so študentje sposobni kreativno sodelovati v študijah in voditi študije o biodiverziteti na različnih nivojih.	Transferable/Key Skills and other attributes: Students capture creative knowledge about global biodiversity patterns and processes. On the basis of knowledge of international biodiversity convention, students are capable to creatively take part in and to conduct biodiversity studies on different levels.
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Metode poučevanja in učenja:
Learning and teaching methods:

Predavanja Seminar Vaje	Lecture Seminar Exercises
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Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

Seminarska naloga	50	Seminar paper
Ustni izpit	50	Oral exam

Reference nosilca / Lecturer's references:

JANŽEKOVIC, Franc, KLENOVŠEK, Tina, MLÍKOVSKÝ, Jiří, TOŠKAN, Borut, VELUŠČEK, Anton. Eneolithic pile dwellers captured waterfowl in winter : analysis of avian bone remains from two pile dwellings in Ljubljansko barje (Slovenia). *International journal of osteoarchaeology*, ISSN 1047-482X. [Print ed.], 2021, str. 1-10, ilustr., doi: 10.1002/oa.3012. [COBISS.SI-ID 67079683],

KLENOVŠEK, Tina, JAKŠIĆ, Predrag, JANŽEKOVIC, Franc. Eyespot variation in the meadow brown butterfly, *Maniola jurtina* (Insecta: Lepidoptera) in diverse climatic conditions. *Diversity*. 2025, vol. 17, iss. 10, [article no.] 675, 16 str., ilustr. ISSN 1424-2818. <https://doi.org/10.3390/d17100675>, [Digitalna knjižnica Univerze v Mariboru – DKUM](#), DOI: [10.3390/d17100675](https://doi.org/10.3390/d17100675), DOI: [20.500.12556/DKUM-95619](https://doi.org/10.3390/d17100675). [COBISS.SI-ID [251306243](#)]

KLENOVŠEK, Tina, JAKŠIĆ, Predrag, JANŽEKOVIC, Franc. Size and shape variability of the wing in burnet moth, *Zygaena ephialtes* (L., 1767) (Lepidoptera: Zygaenidae) = Burnet güvesi, *Zygaena ephialtes* (L., 1767) (Lepidoptera: Zygaenidae)'nde kanadın boy ve şekil değişkenliği. *Turkish journal of entomology*. 2022, vol. 46, iss. 2, str. 239-247. ISSN 2536-491X. [Digitalna knjižnica Univerze v Mariboru – DKUM](#), DOI: [10.16970/entoted.1096288](https://doi.org/10.16970/entoted.1096288), DOI: [20.500.12556/DKUM-88799](https://doi.org/10.16970/entoted.1096288). [COBISS.SI-ID [118037251](#)]