



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Biodiverziteta
Course title:	Biodiversity

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija, 1. stopnja		3	5
Biology, 1st degree			

Vrsta predmeta / Course type

Obvezni (Obligatory)

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
45			30		105	6

Nosilec predmeta / Lecturer:

Franc JANŽEKOVICH

Jeziki /

Languages:

Predavanja / Lectures:

Vaje / Tutorial:

Slovenski /Slovenian

Slovenski /Slovenian

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

Prerequisites:

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Vsebina:

- Konvencija o biološki raznovrstnosti
- Opredelitev biodiverzitete v globalnem merilu; temelji ekološkega in evolucijskega ozadja
- Ekosistemske funkcije in usluge
- Abundanca, redkost in izumrtje
- Izguba habitatov, njihova degradacija in fragmentacija
- Demografija in genetika v študijah viabilnosti populacij; primeri
- Biodiverziteta posameznih taksonomskih skupin; vzorci in trendi pri izbranih skupinah rastlin in živali

Content (Syllabus outline):

- Convention on biological diversity
- Definition of biodiversity on global scale: ecological and evolutionary background
- Ecosystem functions and services
- Abundance, rarity, extinctions.
- Habitat loss, their degradation and fragmentation
- Demography and genetics in population viability studies: case studies
- Biodiversity among taxonomical groups; patterns and trends within selected taxonomic groups

Temeljni literatura in viri / Readings:

- Dobson, A. P., 1995: Conservation and Biodiversity. American Scientific Library, New York.
- Kryštufek, B. 1999: Osnove varstvene biologije. Tehniška založba Slovenije, Ljubljana.
- Levin, S. A. 2001: Encyclopedia of biodiversity. Academic Press, cop. San Diego.
- Sodhi N.S., P.R. Ehrlich 2010. Conservation Biology for All. Oxford University Press.

Cilji in kompetence:

- Študenti se seznaniijo z ekološkimi in evolucijskimi temelji biodiverzitete
 - Spoznajo biogeografsko razdelitev in njeno vrstno biodiverzitetu po taksonomskih skupinah
 - Spoznajo naravne (abundanca, redkost, izumrtje) in antropogene (izguba, degradacija, fragmentacija habitatov) gonilne sile biodiverzitete
- Seznaniijo se s stanjem biodiverzitete in konvencijami o biodiverziteti

Objectives and competences:

- Students learn the ecological and evolutionary backgrounds of biodiversity.
- Students get knowledge about biogeographic division and species biodiversity among taxonomical groups.
- Students get insight of natural (abundance, rarity, extinction) and anthropogenic (habitat loss, degradation, fragmentation) driving forces of biodiversity.

Students get insight about current status of biodiversity and learn about conventions regarding biodiversity

Predvideni študijski rezultati:**Znanje in razumevanje:**

- Študent dobi pregled nad definicijami, pomenom in pomembnostjo biodiverzitete na globalni, EU in nacionalni ravni
 - Študent razume naravne in antropogene gonilne sile biodiverzitete in dobi vpogled v vrstno biodiverzitetu različnih taksonomskih skupin
- Spozna mednarodne konvencije s področja biodiverzitete

Intended learning outcomes:**Knowledge and understanding:**

- Student get an overview on the definitions, meaning and importance of biodiversity on global, EU and national scale
 - Student learn about natural and anthropogenic driving forces of biodiversity, and get insights about species biodiversity in different taxonomical groups
- Student learn about international conventions regarding biodiversity

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Metode poučevanja in učenja:

- Predavanja
- Laboratorijske vaje

Learning and teaching methods:

- Lectures
- Laboratory excersises

Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

- Seminarska naloga
- Pisni izpit

50
50

- Seminar essay
- Written exam

Reference nosilca / Lecturer's references:

KRYŠTUFEK, Boris, JANŽEKOVICH, Franc, REŽEK DONEV, Nataša. Elevational diversity of reptiles on two Dinaric mountains. *J. Nat. Hist.*, Feb. 2008, vol. 42, no. 5/8, str. 399-408.

KRYŠTUFEK, Boris, ŠORGO, Andrej, JANŽEKOVICH, Franc. Elevational distribution of small terrestrial mammals on Mt. Pohorje, Slovenia = Distribuzione altitudinale di piccoli mammiferi terrestri sul monte Pohorje, Slovenia. *Ann. Ser. hist. nat.*, 2010, vol. 20, št. 2, str. 113-122.

JANŽEKOVICH, Franc, NOVAK, Tone. PCA - a powerful method for analyze ecological niches. V: SANGUANSAT, Parinya (ur.). *Principal component analysis - multidisciplinary applications*. Rijeka: InTech, 2012, str. 127-142.

NOVAK, Tone, PERC, Matjaž, LIPOVŠEK DELAKORDA, Saška, JANŽEKOVICH, Franc. Duality of terrestrial subterranean fauna. *Int. J. Speleol. (Ed. ital.)*, 2012, vol. 41, no. 2, str. 181-188.