



Univerza v Mariboru



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*Fakulteta za naravoslovje in  
matematiko*

### UČNI NAČRT PREDMETA / COURSE SYLLABUS

<b>Predmet:</b>	Biodiverziteta
<b>Course title:</b>	Biodiversity

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

**Vrsta predmeta / Course type**

Obvezni (Obligatory)

**Univerzitetna koda predmeta / University course code:**

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

**Nosilec predmeta / Lecturer:**

Franc JANŽEKOVIČ

**Jeziki /**

**Predavanja / Lectures:** Slovenski /Slovenian

**Languages:**

**Vaje / Tutorial:** Slovenski /Slovenian

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

**Prerequisites:**

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**Vsebina:**

**Content (Syllabus outline):**

- 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

- Convention on biological diversity
- Definition of biodiversity on global scale: ecological and evolutionary background
- Ecosystem functiona 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 seznanijo 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
- Seznanijo 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

**Metode poučevanja in učenja:****Learning and teaching methods:**

<ul style="list-style-type: none"> <li>• Predavanja</li> <li>• Laboratorijske vaje</li> </ul>
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<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Laboratory excersises</li> </ul>
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Delež (v %) /

**Načini ocenjevanja:****Weight (in %)****Assessment:**

<ul style="list-style-type: none"> <li>• Seminarska naloga</li> <li>• Pisni izpit</li> </ul>	50	<ul style="list-style-type: none"> <li>• Seminar essay</li> <li>• Written exam</li> </ul>
	50	

**Reference nosilca / Lecturer's references:**

KRYŠTUFEK, Boris, JANŽEKOVIČ, 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, JANŽEKOVIČ, 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.

JANŽEKOVIČ, 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, JANŽEKOVIČ, Franc. Duality of terrestrial subterranean fauna. *Int. J. Speleol. (Ed. ital.)*, 2012, vol. 41, no. 2, str. 181-188.