



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Izbrana poglavja iz ekologije
Course title:	Selected topics in Ecology

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 cycle			

Vrsta predmeta / Course type

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
15	3		6	6	150	6

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lectures:
Languages: Vaje / Tutorial:

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

Ni pogojev. Priporočljivo za študente brez biološkega/ekološkega predznanja.

Prerequisites:

None. Advised for students without biological/ecological background.

Vsebina:

- Spoznavanje izbranih ekoloških konceptov
- Organizmi v okolju (pogoji in viri)
- Pregled zakonitosti populacijske ekologije
- Ekološke aplikacije na nivoju organizma, vrste in populacije
- Odnosi med vrstami (kompeticija, plenilstvo, parazitizem, simbioze,...)

Content (Syllabus outline):

- Familiarizing with selected ecological concepts
- Organisms in their environments (conditions and resources)
- Review of principles in population ecology
- Ecological applications at the level of organism, species and population
- Species interactions (competition,

- Združbe in ekosistemi

- predation, parasitism, symbiosis,...)
- Communities and ecosystem

Temeljni literatura in viri / Readings:

Temeljna literatura / Basic readings:

- Begon, M., Townsend C.R., Harper J.L., 2006: Ecology: From Individuals to Ecosystems. John Wiley & Sons.

Priporočena literatura/ Recommended literature:

- Cain M.L., Bowman W.D., Hacker S.D., 2014: Ecology. Sinauer Associates.

Cilji in kompetence:

- Primerjava vpliva abiotičnih in biotičnih dejavnikov na organizme, združbe in ekosisteme.
- Pojasnitev osnovnih pravil, konceptov in teorij v ekologiji.
- Analiziranje osnovnih relacij med organizmi in okoljem .
- Pojasnitev zakonitosti v ekologiji populacij.

Objectives and competences:

- Comparison of impact of abiotic and biotic environmental factors on organisms, communities, and ecosystems.
- Explanation of the basic ecological laws, concepts and theories.
- Analysis of the basic relations between the individual and its environment
- Explanation of principles in population ecology.

Predvideni študijski rezultati:

Študenti bodo sposobni:

- diskutirati ekološke zakonitosti;
- primerjati glavne dejavnike v okolju;
- pojasniti koncept o pogojih in virih za preživetje in sobivanje ter poznavanje s tem povezanih prilagoditev osebkov in medvrstnih odnosov;
- diskutirati primere ekoloških raziskav na nivoju organizma, na nivoju ene vrste (avtekologija), na nivojih populacije, združbe in ekosistema.

Intended learning outcomes:

Students will be able to:

- discuss rules in ecology;
- compare the main factors in an environment;
- explain the concept about conditions and resources for survival and coexistence;
- of adaptations and interspecific relationships;
- discuss ecological investigations on the level of individual, single species, population, community and ecosystem studies.

Metode poučevanja in učenja:

- Predavanja
- Seminar
- Terenske vaje
- Laboratorijske vaje
- Individualno delo

Learning and teaching methods:

- Lectures
- Seminar
- Field work
- Laboratory work
- Individual work

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
<ul style="list-style-type: none"> • Seminar work • Laboratorijsko/Terensko delo (prisotnost, dnevnik, pisni test) pogoj za pristop k izpitu • Pisni končni izpit 	<p>15%</p> <p>15%</p> <p>70%</p>	<ul style="list-style-type: none"> • Seminar work • Lab/Field work (attendance, reports, written exam) mandatory for final exam • Written final exam

Reference nosilca / Lecturer's references:

- ŠAJNA, Nina. (2019) First record of non-native Asian seed beetle, *Megabruchidius dorsalis* (Fåhræus, 1839) and its parasitoid, in Slovenia. *BiolInvasions Records*, vol. 8, issue 3, str. 515-520.
- ŠAJNA, Nina, ŠIPEK, Mirjana, ŠUŠTAR VOZLIČ, Jelka, KALIGARIČ, Mitja. (2019) Germination behavior of the extremely rare *Hladnikia pastinacifolia* Rchb. (Apiaceae) - a Pleistocene *in situ* survivor. *Acta botanica Croatica : an international journal of botany*, vol. 78, no. 2, str. 107-115.
- ŠAJNA, Nina, KALIGARIČ, Mitja, IVAJNŠIČ, Danijel. (2014) Reproduction biology of an alien invasive plant : a case of drought-tolerant *Aster squamatus* on the Northern Adriatic seacoast, Slovenia. V: RANNOW, Swen (ur.), NEUBERT, Marco (ur.). *Managing protected areas in Central and Eastern Europe under climate change, (Advances in global change research, vol. 58)*. Dordrecht [etc.]: Springer, str. 279-288.