Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	**Ekologija rastlin**
Course title:	**Plant Ecology**

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Univerzitetni študijski program Ekologija z naravovarstvom, 1. stopnja		**2.; 2nd**	**4.; 4th**
Undergraduate university programme Ecology with Nature Conservation, 1st degree			

Vrsta predmeta / Course type	Obvezni/Obligatory
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
45			**15**	**15**	**105**	**6**

Nosilec predmeta / Lecturer:	Mitja KALIGARIČ

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Jih ni.	No.

Vsebina:	**Content (Syllabus outline):**
• Definicije v ekologiji rastlin. • Svetloba in fotosinteza. • Vodna bilanca rastlin. • Talne razmere, prehrana rastlin in interakcije v tleh. • Temperaturne razmere. • Populacijska ekologija rastlin (struktura in rast populacij, življenjski cikli,	• Definitions in plant ecology. • Light and photosinthesis. • Water relations in plants. • Soil conditins, plant nutrition and bellow-ground interactions. • Temperature conditiones. • Population ecology of plants (structure and growth of populations, life histories,

demografija rastlin). • Združbe in lastnosti združb: kompeticija, disturbanca, stres, sukcesije. • Ekosistemski procesi.	plant demography). • Communities and community properties: competition, disturbance, stress, successions. • Ecosystem processes.

Temeljni literatura in viri / Readings:

- Bresinsky, A., Körner, C., Kadereit, J.W., Neuhaus**,** G., Sonnewald,U., 2013: Strasburger's Plant Sciences. Springer Verlag.
- Chapin, F. S., P. A. Matson & H. A. Mooney, 2002: Principles of terrestrial ecosystem ecology. Springer Verlag.
- Gurevitch, J., Scheiner S., Fox G: 2006: Plant ecology. Second Edition. Sinauer Associates Inc. Publishers, Sunderland, Massachutsetts, USA.
- Tome, D., 2007: Ekologija. TZS.

Cilji in kompetence:	**Objectives and competences:**
• Podati definicije v ekologiji rastlin. • Pregled osnovnih relacij med osebkom in okoljem. • Podati osnove populacijske ekologije rastlin. • Pregled osnovnih relacij med populacijami in združbami ter prostorsko in časovno dinamiko združb. • Pregled osnovnih relacij med ekosistemi in krajino.	• To give definitions in plant ecology. • To give a review of the basic relations between the individual and its environment. • To introduce principles of plant population ecology. • To give a review of the basic relations between populations and communities, as well as to introduce spatial and temporal dynamics of communities. • To give a review of the basic relations between ecosystems and landscapes.

Predvideni študijski rezultati:	**Intended learning outcomes:**
Znanje in razumevanje: • Poznavanje in razumevanje temeljnih zakonitosti v ekologiji rastlin. • Poznavanje glavnih okoljskih dejavnikov, ki pogojujejo razvoj osebka, populacije in združbe. • Razumevanje lastnosti in procesov v ekosistemih. **Prenesljive/ključne spretnosti in drugi atributi:** • Sposobnost razumevanja ključnih segmentov ekologije rastlin. • Sposobnost izmeriti in razumeti	**Knowledge and understanding:** • Knowledge and understanding of basic principles in plant ecology. • Knowledge about common environmental factors, which affect the developement of individuals, populations and communities. • Understanding of ecosystem properties and processes. **Transferable/Key Skills and other attributes:** • Ability to understand the key issues in

okoljske dejavnike, ki vplivajo na osebek, populacijo in združbo.	plant ecology. • Capability to measure and understand the environemntal factors affecting individuals, populations and communities.

Metode poučevanja in učenja:	**Learning and teaching methods:**
• Predavanja • Laboratorijske vaje • Terenske vaje	• Lectures • Laboratory exercises • Field excersise

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
• Praktični kolokvij iz vaj • Ustni kolokvij iz vaj • Pisni izpit	25 25 50	• Practical exam of laboratory exercises • Oral exam of laboratory exercises • Written exam

Reference nosilca / Lecturer's references:

1.IVAJNŠIČ, Danijel, KALIGARIČ, Mitja. How to preserve coastal wetlands, threatened by climate change-driven rises in sea level. *Environmental management*, ISSN 0364-152X, 2014, str. [1-14], ilustr., doi: 10.1007/s00267-014-0244-8. [COBISS.SI-ID 20339208]

2. KALIGARIČ, Mitja, IVAJNŠIČ, Danijel. Vanishing landscape of the "classic" Karst : changed

landscape identity and projections for the future. *Landscape and urban planning*, ISSN 0169-2046. [Print ed.], 2014, vol. 132, str. 148-158, ilustr., doi: 10.1016/j.landurbplan.2014.09.004. [COBISS.SI-ID 20808712]

3. COUSINS, Sara A. O., KALIGARIČ, Mitja, BAKAN, Branko, LINDBORG, Regina. Political systems affect mobile and sessile species diversity - a legacy from the post-WWII period. *PloS one*, ISSN 1932-6203, 2014, vol. 9, iss. 8, str. e103367-1-e103367-7. http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0103367&representation=PDF, doi: 10.1371/journal.pone.0103367. [COBISS.SI-ID 20770568]

4. ŠAJNA, Nina, REGVAR, Marjana, KALIGARIČ, Simona, ŠKVORC, Željko, KALIGARIČ, Mitja. Germination characteristics of Salicornia patula Duval-Jouve, S. emerici Duval-Jouve, and S. veneta Pign. et Lausi and their occurrence in Croatia. *Acta botanica Croatica*, ISSN 0365-0588, 2013, vol. 72, iss. 2, str. 347-358, ilustr. http://www.degruyter.com/view/j/botcro.ahead-of-print/botcro-2013-0011/botcro-2013-0011.xml, doi: 10.2478/botcro-2013-0011. [COBISS.SI-ID 20094728]

5. PIPENBAHER, Nataša, KALIGARIČ, Mitja, MASON, Norman W. H., ŠKORNIK, Sonja. Dry calcareous grasslands from two neighboring biogeographic regions: relationship between plant

traits and rarity. *Biodiversity and conservation*, ISSN 0960-3115, 2013, vol. 22, iss. 10, str. 2207-2221, doi: 10.1007/s10531-013-0520-6. [COBISS.SI-ID 19978504]