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**	**4**
Undergraduate university programme Ecology with Nature Conservation, 1st degree		**2**	**4**

Vrsta predmeta / Course type	Obvezni/Compulsory
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:

- 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, demografija rastlin).
- Združbe in lastnosti združb: kompeticija, disturbanca, stres, sukcesije.
- Ekosistemski procesi.

Content (Syllabus outline):

- Definitions in plant ecology.
- Light and photosinthesis.
- Water relations in plants.
- Soil conditins, plant nutrition and bellow-ground interactions.
- Temperature conditions.
- Population ecology of plants (structure and growth of populations, life histories, plant demography).
- Communities and community properties: competition, disturbance, stress, successions.
- Ecosystem processes.

Temeljni literatura in viri / Readings:

Obvezna literatura:

- 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.

Priporočena literatura:

- 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:

- 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.

Objectives and competences:

- 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:

Znanje in razumevanje:

- Poznavanje in razumevanje temeljnih zakonitosti v ekologiji rastlin.

Intended learning outcomes:

Knowledge and understanding:

- Knowledge and understanding of basic principles in plant ecology.

• 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 okoljske dejavnike, ki vplivajo na osebek, populacijo in združbo.	• 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 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:

IVAJNŠIČ, Danijel, KALIGARIČ, Mitja, FANTINATO, Edy, DEL VECCHIO, Silva, BUFFA, Gabriella. The fate of coastal habitats in the Venice Lagoon from the sea level rise perspective. Applied geography, ISSN 0143-6228. [Print ed.], 2018, vol. 98, str. 34-42, ilustr., doi: 10.1016/j.apgeog.2018.07.005. [COBISS.SI-ID 24006152]

ŠAJNA, Nina, ADAMLJE, Kristijan, KALIGARIČ, Mitja. Dittrichia graveolens - how does soil salinity determine distribution, morphology, and reproductive potential?. Annales : anali za istrske in mediteranske študije, Series historia naturalis, ISSN 1408-533X. [Tiskana izd.], 2017, letn. 27, št. 1, str. 7-12, ilustr., doi: 10.19233/ASHN.2017.02. [COBISS.SI-ID 23274760]

IVAJNŠIČ, Danijel, ŠAJNA, Nina, KALIGARIČ, Mitja. Primary succession on re-created coastal wetland leads to successful restoration of coastal halophyte vegetation. Landscape and urban planning, ISSN 0169-2046. [Print ed.], 2016, vol. 150, str. 79-86, ilustr., doi: 10.1016/j.landurbplan.2016.03.005. [COBISS.SI-ID 22035464]