



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 BIOLOGIJA, 1. stopnja		2	4
Undergraduate university programme BIOLOGY, 1 st degree		2	4

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
45			15	15	105	6

Nosilec predmeta / Lecturer:

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

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

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

- Definitions in plant ecology.
- Light and photosynthesis.
- Water relations in plants.
- Soil conditions, plant nutrition and below-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:

- Bresinsky, A., Körner, C., Kadereit, J.W., Neuhaus, G., Sonnewald, U., 2013: Strasburger's Plant Sciences. Springer Verlag.
- Kedy, P.A., 2017: Plant Ecology: origins, processes, consequences. 2nd ed., Cambridge University Press.
- Gurevitch, J., Scheiner S., Fox G: 2006: Plant ecology. Second Edition. Sinauer Associates Inc. Publishers, Sunderland, Massachusetts, USA.
- Nentwig, W., Bacher, S., Beierkuhnlein, C., Brandl, R., Grabher, G., 2004: Oekologie. Spektrum, Heidelberg in Berlin.
- 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 temeljnih zakonitosti v ekologiji rastlin.
 - Poznavanje glavnih okoljskih dejavnikov, ki pogojujejo razvoj osebka,

Intended learning outcomes:

- Knowledge and understanding:
- Knowledge of basic principles in plant ecology.
 - Knowledge about common environmental factors, which affect the

<p>populacije in združbe.</p> <ul style="list-style-type: none"> • Poznavanje lastnosti in procesov v ekosistemih. <p>Prenesljive/ključne spretnosti in drugi atributi:</p> <ul style="list-style-type: none"> • Sposobnost razumevanja ključnih segmentov ekologije rastlin. • Sposobnost izmeriti in razumeti okoljske dejavnike, ki vplivajo na osebek, populacijo in združbo. 	<p>development of individuals, populations and communities. Knowledge of ecosystem properties and processes.</p> <p>Transferable/Key Skills and other attributes:</p> <ul style="list-style-type: none"> • Ability to understand the key issues in plant ecology. • Capability to measure and understand the environmental factors affecting individuals, populations and communities.
--	--

Metode poučevanja in učenja:

<ul style="list-style-type: none"> • Predavanja • Laboratorijske vaje • Terenske vaje
--

Learning and teaching methods:

<ul style="list-style-type: none"> • Lectures • Laboratory exercises • Field exercise
--

Načini ocenjevanja:

<ul style="list-style-type: none"> • Praktični kolokvij iz vaj • Ustni kolokvij iz vaj • Pisni izpit 	<p>Delež (v %) / Weight (in %)</p> <p>25 25 50</p>	<p>Assessment:</p> <ul style="list-style-type: none"> • Practical exam of laboratory exercises • Oral exam of laboratory exercises • Written exam
---	---	---

Reference nosilca / Lecturer's references:

IVAJSIČ, Danijel, DENAC, Damijan, DENAC, Katarina, PIPENBAHER, Nataša, KALIGARIČ, Mitja. The Scops owl (*Otus scops*) under human-induced environmental change pressure. *Land use policy*. [Print ed.]. Dec. 2020, vol. 99, str. 1-8, ilustr. ISSN 0264-8377. DOI: [10.1016/j.landusepol.2020.104853](https://doi.org/10.1016/j.landusepol.2020.104853). [COBISS.SI-ID [21112579](#)], [JCR, SNIP, WoS do 17. 11. 2021: št. citatov (TC): 4, čistih citatov (CI): 3, čistih citatov na avtorja (CIAu): 0,60, Scopus do 24. 10. 2021: št. citatov (TC): 5, čistih citatov (CI): 4, čistih citatov na avtorja (CIAu): 0,80]

ŠAJNA, Nina, ŠIPEK, Mirjana, ŠUŠTAR VOZLIČ, Jelka, KALIGARIČ, Mitja. Germination behavior of the extremely rare *Hladnikia pastinacifolia* Rchb. (Apiaceae) - a Pleistocene in situ survivor. *Acta botanica Croatica : an international journal of botany*. 2019, vol. 78, no. 2, str. 107-115, ilustr. ISSN 0365-0588. DOI: [10.2478/botcro-2019-0017](https://doi.org/10.2478/botcro-2019-0017). [COBISS.SI-ID [24787720](#)], [JCR, SNIP, WoS, Scopus]

PAUŠIČ, Igor, LIPOVŠEK, Matej, JAKELY, Dietmar, PAVLEC, Nika, IVAJSIČ, Danijel, KALIGARIČ, Mitja. Local climate and latitude affect flower form of *Ophrys fuciflora* (Orchidaceae) : evidence for clinal variation. *Botany Letters*. 2019, vol. 166, iss. 4, str. 499-512, ilustr. ISSN 2381-8107. DOI: [10.1080/23818107.2019.1668298](https://doi.org/10.1080/23818107.2019.1668298). [COBISS.SI-ID [24827400](#)], [JCR, SNIP, WoS do 23. 4. 2023: št. citatov (TC): 6, čistih citatov (CI): 5, čistih citatov na avtorja (CIAu): 0,83, Scopus do 7. 5. 2023: št. citatov (TC): 7, čistih citatov (CI): 6, čistih citatov na avtorja (CIAu): 1,00] kategorija: 1A3 (Z); uvrstitev: SCIE, Scopus, MBP (BIOABS, BIOPREW, CAB, PUBMED);

KALIGARIČ, Mitja, ČUŠ, Jure, ŠKORNIK, Sonja, IVAJSIČ, Danijel. The failure of agri-environment measures to promote and conserve grassland biodiversity in Slovenia. *Land use policy*. [Print ed.]. 2019, 80, str. 127-134, ilustr. ISSN 0264-8377. DOI: [10.1016/j.landusepol.2018.10.013](https://doi.org/10.1016/j.landusepol.2018.10.013). [COBISS.SI-ID [24068872](#)], [JCR, SNIP, WoS do 22. 12. 2022: št. citatov (TC): 17, čistih citatov (CI): 13, čistih citatov na avtorja (CIAu): 3,25, Scopus do 8. 4. 2023: št. citatov (TC): 24, čistih citatov (CI): 20, čistih citatov na avtorja (CIAu): 5,00] kategorija: 1A1 (Z, A", A', A1/2); uvrstitev: Scopus (d), SSCI, Scopus, MBP (ASFA, CAB, GEOREF, PAIS, PUBMED)

IVAJNSIČ, 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*. [Print ed.]. 2018, vol. 98, str. 34-42, ilustr. ISSN 0143-6228. DOI: [10.1016/j.apgeog.2018.07.005](https://doi.org/10.1016/j.apgeog.2018.07.005). [COBISS.SI-ID [24006152](#)], [JCR, SNIP, WoS do 19. 1. 2023: št. citatov (TC): 10, čistih citatov (CI): 10, čistih citatov na avtorja (CIAu): 2,00, Scopus do 8. 11. 2022: št. citatov (TC): 11, čistih citatov (CI): 11, čistih citatov na avtorja (CIAu): 2,20] kategorija: 1A1 (Z, A", A', A1/2); uvrstitev: Scopus (d), SSCI, Scopus, MBP (CAB, GEOREF, PUBMED); tip dela je verificiral OSICN