



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, 1st degree		2nd	4th

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 / Predavanja / Lectures:
Languages: Vaje / Tutorial:

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

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:

Content (Syllabus outline):

- Definitions in plant ecology.
- Light and photosynthesis.
- Water relations in plants.
- Soil conditions, plant nutrition and bellow-ground interactions.
- Temperature conditions.
- Population ecology of plants (structure and growth of populations, life histories, plant demography).
- Communities and community

kompeticija, disturbanca, stres, sukcesije.

- Ekosistemski procesi.

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, Massachusetts, 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.
- Poznavanje glavnih okoljskih dejavnikov, ki pogojujejo razvoj osebka, populacije in združbe.
- Razumevanje lastnosti in procesov v ekosistemi.

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.

Intended learning outcomes:

Knowledge and understanding:

- Knowledge and understanding of basic principles in plant ecology.
- Knowledge about common environmental factors, which affect the development 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 environmental factors affecting individuals, populations and communities.
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Metode poučevanja in učenja:

Learning and teaching methods:

<ul style="list-style-type: none"> • Predavanja • Laboratorijske vaje • Terenske vaje 	<ul style="list-style-type: none"> • Lectures • Laboratory exercises • Field excercise
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Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
<ul style="list-style-type: none"> • Praktični kolokvij iz vaj • Ustni kolokvij iz vaj • Pisni izpit 	<p>25</p> <p>25</p> <p>50</p>	<ul style="list-style-type: none"> • 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](https://doi.org/10.1007/s00267-014-0244-8). [COBISS.SI-ID [20339208](https://www.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](https://doi.org/10.1016/j.landurbplan.2014.09.004). [COBISS.SI-ID [20808712](https://www.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](https://doi.org/10.1371/journal.pone.0103367). [COBISS.SI-ID [20770568](https://www.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](https://doi.org/10.2478/botcro-2013-0011). [COBISS.SI-ID [20094728](https://www.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](https://doi.org/10.1007/s10531-013-0520-6). [COBISS.SI-ID [19978504](https://www.cobiss.si/id/19978504)]

