



**OPIS PREDMETA / SUBJECT SPECIFICATION**

<b>Predmet:</b>	Ekologija rastlin
<b>Subject Title:</b>	Plant Ecology

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Biologija/Biology	Biologija/Biology	2	4

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
45			15	15	105	6

Nosilca predmeta / Lecturers: Mitja KALIGARIČ

Jeziki / Predavanja / slovenski / Slovenian

Languages: Lecture:

Vaje / Tutorial: slovenski / Slovenian

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 podzemne interakcije
- Temperaturne razmere
- Populacijska ekologija rastlin (struktura in rast populacij, življenjski cikli, demografija rastlin)
- Združbe in lastnosti združb: kompeticija, disturbanca, stres, sukcesije
- Ekosistemski procesi
- Biomi in vegetacija Zemlje
- Vegetacija Slovenije

**Contents (Syllabus outline):**

- 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
- Biomes and vegetation on Earth
- Vegetation of Slovenia

Temeljni študijski viri / Textbooks:

- Bohn, U., G. Gollub, C. Hettwer, Z. Neuhäuslová, T. Raus, H. Schlüter, H. Weber, 2004: Map of Natural Vegetation of Europe, Federal Agency for Nature Conservation, Bonn.
- Chapin, F. S., P. A. Matson & H. A. Mooney, 2002: Principles of terrestrial ecosystem ecology. Springer Verlag.
- Dierschke, H., 1994: Pflanzensoziologie. Ulmer, Stuttgart.
- Gurevitch, J., Scheiner S., Fox G: 2002: Plant ecology. Sinauer Associates Inc. Publishers, Sunderland, Massachusetts, USA.
- Marinček, L., 1987: Bukovi gozdovi na Slovenskem. Delavska enotnost, Ljubljana.
- Marinček, L., A. Čarni, 2002: Komentar k vegetacijski karti gozdnih združb Slovenije 1:400.000, karta, CD, Založba ZRC, Ljubljana,
- Mucina, L., G. Grabherr, S. Wallnöfer, 1993: Die Pflanzengesellschaften Österreichs. Teil I-III Wälder und Gebüsche. Gustav Fisher, Jena.
- Nentwig, W., S. Bacher, C. Beierkuhnlein, R. Brandl, G. Grabherr, 2004: Ökologie. Spektrum Akad. Verlag, Heidelberg, Berlin.
- Rodwell, J., J. H. J. Schamineé, L. Mucina, S. Pignatti, J. Dring, D. Moss, 2002: The diversity of European vegetation. An overview of phytosociological alliances and their relationship to EUNIS habitats. Wageningen, NL. EC-LNV. Report EC-LNV nr. 2002/054

#### **Cilji:**

- 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
- Podati pregled nad biomi in vegetacijo Zemlje, Evrope in Slovenije
- Kratek opis vegetacije Slovenije

#### **Objectives:**

- 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.
- To introduce the overview on biomes and vegetation of the Earth, Europe and Slovenia.
- Short description of the vegetation of Slovenia.

#### **Predvideni študijski rezultati:**

##### Znanje in razumevanje:

- Poznavanje in razumevanje temeljnih zakonitosti v ekologiji rastlin
- Poznavanje glavnih okoljskih dejavnikov, ki pogojujejo razvoj osebkov, populacije in združbe
- Razumevanje lastnosti in procesov v ekosistemi
- Pregled biomi ter vegetacije Zemlje, Evrope in Slovenije

##### Prenesljive/ključne spretnosti in drugi atributi:

- Sposobnost razumevanja ključnih

#### **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
- An overview over the biomes and vegetation of the Earth, Europe and Slovenia

##### Transferable/Key Skills and other attributes:

- Ability to understand the key issues in plant

- segmentov ekologije rastlin
- Sposobnost izmeriti in razumeti okoljske dejavnike, ki vplivajo na osebek, populacijo in združbo
- Sposobnost prepoznati vegetacijske tipe na različnih hierarhičnih nivojih

- ecology
- Capability to measure and understand the environmental factors affecting individuals, populations and communities
- Capability to recognize vegetation types on different hierarchical levels

**Metode poučevanja in učenja:**

**Learning and teaching methods:**

- Predavanja
- Laboratorijske vaje
- Terenske vaje

- Lectures
- Laboratory exercises
- Field excersises

**Načini ocenjevanja:**

Delež (v %) /  
Weight (in %)

**Assessment:**

<ul style="list-style-type: none"> <li>• Praktični kolokvij iz vaj</li> <li>• Ustni kolokvij iz vaj</li> <li>• Pisni izpit</li> </ul>	<p>25</p> <p>25</p> <p>50</p>	<ul style="list-style-type: none"> <li>• Practical exam of laboratory exercises</li> <li>• Oral exam of laboratory exercises</li> <li>• Written exam</li> </ul>
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**Materialni pogoji za izvedbo predmeta :**

- *Multimedijska predavalnica*
- *Laboratory*

**Material conditions for subject realization**

- *Lecture room with multimedia presentations*
- *Laboratory*

**Obveznosti študentov:**

*(pisni, ustni izpit, naloge, projekti)*

**Students' commitments:**

*(written, oral examination, coursework, projects):*

<ul style="list-style-type: none"> <li>• Praktični kolokvij iz vaj</li> <li>• Ustni kolokvij iz vaj</li> <li>• Pisni izpit</li> </ul>	<ul style="list-style-type: none"> <li>• Practical exam of laboratory exercises</li> <li>• Oral exam of laboratory exercises</li> <li>• Written exam</li> </ul>
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