



Univerza v Mariboru



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*Fakulteta za naravoslovje in
matematiko*

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Sistematika in filogenija nižjih rastlin
Course title:	Systematic and phylogeny of lower plants

Študijski program in stopnja	Študijska smer	Letnik	Semester
Study programme and level	Study field	Academic year	Semester
Biologija, 1.stopnja		1	2
Biology, 1.degree		1	2

Vrsta predmeta / Course type

Obvezni / obligatory

Univerzitetna koda predmeta / University course code:

Predavanja	Seminar	Sem. vaje	Lab. vaje	Teren. vaje	Samost. delo	ECTS
Lectures	Seminar	Tutorial	Laboratory work	Field work	Individ. work	
30	-	-	30	-	90	5

Nosilec predmeta / Lecturer:

Sonja ŠKORNIK

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

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

Jih ni

Prerequisites:

No.

Vsebina:

Pod pojmom »nižje rastline« razumemo mahove in praprotnice, po dogovoru pa skupino vključene tudi cianobakterije in gljivice. Podane so morfološke in funkcionalne značilnosti skupin, s poudarkom na načini razmnoževanja. Poudarjena sta evolutivni aspekt in filogenija.

Content (Syllabus outline):

As »lower plants«, Pteridophytes, Bryophytes and Algae are understood, according to agreement, also Cyanobacteria and Fungi are included. The morphological and functional characteristics of the groups are given. The evolutionary aspect and phylogeny are stressed.

Temeljni literatura in viri / Readings:

- Campbell, N.A. in J.B.Reece, 2005. Biology. 7th edition, Pearson/Benjamin Cummings, San Francisco. - Moore, R. s sod. 1998. Botany. 2nd Edition
- Graham E. L. & Wilcox W. L., 1999: Algae. Prentice Hall, USA.
- Raven, P.H. 2005. Biology of Plants. W.H.Freeman and Company /Worth Publishers
- P. Sitte s sod. 2002. Der Botanik : für Hochschulen: begründet von E. Strasburger. 35. Aufl. Heidelberg, Berlin : Spektrum Akademischer Verlag

Cilji in kompetence:

- Podati pregled nad sistemom nižjih rastlin
- Razložiti evolucijo in filogenijo nižjih rastlin
- Pojasniti različne načine razmnoževanja, v povezavi z evolucijo in morfologijo
- Utemeljiti sorodstvene odnose med skupinami
- Primerno predstaviti najbolj značilne predstavnike
- Primerno predstaviti pogoste, gospodarsko uporabne, endemične ter na druge način za človeka pomembne vrste nižjih rastlin

Objectives and competences:

- To give an overview over the taxonomic system of lower plants.
- To explain the evolution of lower plants.
- To explain different reproduction cycles, based on evolution and morphology.
- To ground the relationships between the taxonomic groups.
- To present the most representative species.
- To present the most common, economically useful, endemic, or otherwise for man important lower plant species.

Predvideni študijski rezultati:

Znanje in razumevanje:

Intended learning outcomes:

Knowledge and understanding:

- Evolution and phylogeny of lower plants.
- Systematics of lower plants.
- Basic morphology and reproduction cycles of lower

- Evolucija in filogenija nižjih rastlin - Sistematska delitev nižjih rastlin - Osnovna morfologija in razmnoževanje nižjih rastlin - Vedenje o najpogostejših, endemičnih in uporabnih rastlinah	Knowledge and Understanding: - Knowledge about most common, endemic and useful plant species - Understanding of plant systematics To know the evolution of classification and systems through the history To know some mostly used classification methods To know the basic groups of organisms, which we treat in the frame of plant systematic on the basis of the morphology, reproduction and ecology of the most typical representatives for the each group To understand the origin and evolution of separate plant groups
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Metode poučevanja in učenja:

- Predavanja - Laboratorijske vaje

Learning and teaching methods:

- Lectures - Laboratory excersises

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)		Type (examination, oral, coursework, project):
- Pisni in ustni kolokvij - Pisni izpit	50 50	- Written and oral practical examinations - Written examination

Reference nosilca / Lecturer's references:

ŠKORNIK, Sonja, HARTMAN, Klavdija, KALIGARIČ, Mitja. Relation between CSR functional signatures of dry grasslands from two contrasting geological substrates = Relazione tra sigle funzionali CSR di pascoli aridi su due substrati geologici contrastanti. *Ann, Ser. hist. nat.*, 2010, vol. 20, št. 2, str. 101-112.

ŠKORNIK, Sonja, VIDRIH, Matej, KALIGARIČ, Mitja. The effect of grazing pressure on species richness, composition and productivity in North Adriatic Karst pastures. *Plant Biosyst. (Firenze, Testo stamp.)*, 2010, vol. 144, no. 2, str. 355-364.

PIPENBAHER, Nataša, KALIGARIČ, Mitja, ŠKORNIK, Sonja. Functional comparision of the sub-Mediterranean illyrian meadows from two distinctive geological substrates = Confronto funzionale di praterie sub-mediterranee illiriche di due substrati geologici distinti = Funkcionalna primerjava submediteranskih ilirskih travnikov z dveh različnih geoloških podlag. *Ann, Ser. hist. nat.*, 2008, letn. 18, št. 2, str. 247-258.

PIPENBAHER, Nataša, KALIGARIČ, Mitja, ŠKORNIK, Sonja. Floristic and functional comparision of karst pastures and karst meadows from the North Adriatic Karst = Floristična in funkcionalna primerjava kraških pašnikov in kraških travnikov severnojadranskega Krasa. *Acta carsol.*, 2011, letn. 40, št. 3, str. 515-525.

KALIGARIČ, Mitja, MEISTER, Margit H., ŠKORNIK, Sonja, ŠAJNA, Nina, KRAMBERGER, Branko, BOLHÁR-NORDENKAMPF, Harald R. Grassland succession is mediated by umbelliferous colonizers showing allelopathic potential. *PlantBiosyst. (Firenze, Testo stamp.)*, 2011, vol. 145, no. 3, str. 688-698.