Univerza v Mariboru

Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Sistematska botanika
Course title:	Systematic botany

Študijski program in stopnja **Study programme and level**	**Študijska smer** **Study field**	**Letnik** **Academic year**	**Semester** **Semester**
Izobraževalna biologija/1.stopnja		**1**	**1**
Educational Biology/1.degree		**1**	**1**

Vrsta predmeta / Course type	Obvezni / obligatory
Univerzitetna koda predmeta / University course code:	

Predavanja **Lectures**	**Seminar** **Seminar**	**Sem. vaje** **Tutorial**	**Lab. vaje** **Laboratory work**	**Teren. vaje** **Field work**	**Samost. delo** **Individ. work**	**ECTS**
45	**-**	**-**	**30**	**-**	**105**	**6**

Nosilec predmeta / Lecturer:	Sonja ŠKORNIK

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Jih ni	**No.**

Vsebina:	**Content (Syllabus outline):**
- Uvod: razlaga pojmov, pomen in cilji sistematike in taksonomije, razvoj klasifikacije in sistemov, metode klasifikacije, sistematski nivoji in poimenovanja, botanično delovanje na Slovenskem - Predstavitev skupin organizmov po organizacijskih tipih. (1) prokariotske alge (modrozelene cepljivke), (2) glive (prave glive), (3) evkariotske alge (evglenofiti, dinofiti, heterokontofiti, rodofiti, klorofiti), (4) embriofiti (mahovi, praprotnice, semenke/enokaličnice in dvokaličnice). Za vsako skupino so na primerih njenih najbolj tipičnih in/ali znanih predstavnikov predstavljene njene morfološke značilnosti,	- Introduction: explanation of basic term, meaning and aims of systematic and taxonomy, development of classification and systems, methods of classification, systematic categories and nomenclature, botanical activity in the past in Slovenia - Presentation of groups of plants according to organization types: (1) prokaryotic algae (Cynobacteriota), (2) fungi (Eumycota), (3) eukaryotic algae (Euglenophyta, Dinophyta, Heterokontophyta, Rhodophyta, Chlorophyta) (4) Embryophyta (Bryophyta, Pteridophyta,Spermatophyta /

načini razmoževanja in ekologija. Poudarjena sta evolucijski aspekt in filogenija.	monocotyledons/dicotyledones). For each group the morphological characteristics, types of reproduction and ecology are presented on the basis of their typical and/or known representatives. 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.

- Heywood, V., 1995: Cvetnice. Kritosemenke sveta. DZS, Ljubljana.

- Martinčič, A. (ed.), 2007. Mala flora Slovenije. Tehniška založba, Ljubljana.

- 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:

- Razložiti osnovne pojme v povezavi s sistematiko in taksonomijo
- Predstaviti razvoj sistematike skozi zgodovino in najbolj uporabljene metode
- Predstaviti skupine organizmov (morfologijo, razmnoževanje, ekologijo), ki jih prištevamo k rastlinam na osnovi njihovih najbolj tipičnih in znanih predstavnikov
- Razložiti izvor in razvoj posameznih predstavljenih skupin
- Primerno predstaviti floro Slovenije

Objectives and competences:

- To explain basic terms related to systematic and taxonomy
- To present development of systematic through the history and the most often used methods
- To present groups of organisms (morphology, reproduction, ecology), which are grouped among the plants on the basis of their most typical and known representatives
- To explain the origin and evolution of separate represented groups
- To present the flora of Slovenia

Predvideni študijski rezultati:

Znanje in razumevanje:

- Poznati osnovne pojme v povezavi s sistematiko in taksonomijo
- Poznati razvoj klasifikacije in sistemov skozi zgodovino
- Poznati nekaj najbolj uporabnih metod klasifikacije
- Poznati osnovne skupine organizmov, ki jih obravnavamo v okviru sistematike rastlin in sicer na osnovi morfologije, razmnoževanja in ekologije najbolj tipičnih predstavnikov posameznih skupin
- Razumeti izvor in razvoj posameznih skupin

Intended learning outcomes:

Knowledge and understanding:

- To distinguish term systematic and taxonomy
- 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

Metode poučevanja in učenja:	**Learning and teaching methods:**
- Predavanja - Laboratorijske vaje - Terenske vaje - Individualno določanje po dihotomnem ključu - Izdelava herbarija min. 100 rastlinskih vrst	- Lectures - Laboratory excersises - Field excersises - Individual determination with dichotomic keys - Elaboration of herbarium with min. 100 plant species

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Način (pisni izpit, ustno izpraševanje, naloge, projekt) - Pisni in ustni kolokvij - Ocena izdelave praktičnega izdelka - Pisni izpit	40 10 50	Type (examination, oral, coursework, project): - Written and oral practical examinations - Evaluation of practical product - Written examination

Reference nosilca / Lecturer's references:

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. *Plant Biosyst. (Firenze, Testo stamp.)*, 2011, vol. 145, no. 3, str. 688-698.

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.