



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Biologija rastlin
Course title:	Biology of Plants

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija in ekologija z naravovarstvom, 2. stopnja	/	1	1
Biology and Ecology with Nature Conservation, 2 nd cycle	/	1st	1st

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
30	15	30			105	6

Nosilec predmeta / Lecturer:

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

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

Jih ni.

Prerequisites:

No.

Vsebina:

Content (Syllabus outline):

- Citologija: povezava strukture in funkcije
- Histologija: funkcionalna struktura tkiv skozi filogenetski razvoj rastlin
- Razvoj rastlinskih organov
- Spolno razmnoževanje in njegove osnove skozi filogenetski razvoj rastlin.
- Ponoviti pregled nad sistemom nižjih in višjih rastlin v luči njihovega filogenetskega razvoja
- Primerno predstaviti najbolj znane predstavnike, posebej iz flore Slovenije

- Cytology: structure and function connected
- Histology: functional structure of tissues through the phylogeny of plants
- Plant organs development through the evolution
- Reproduction and its principles through the phylogeny of plants
- Recapitulation of the survey of plant system (both lower and higher plants) in the light of their phylogeny
- Representation of most characteristic species, especially from the flora of Slovenia

Temeljni literatura in viri / Readings:

- Kadereit, J.W., C., Körner, B. Kost, U. Sonnewald, 2014: Strasburger - Lehrbuch der Pflanzenwissenschaften. Springer Spektrum, 37. vollständig überarbeitete & aktualisierte Auflage, Berlin & Heidelberg.
- Simpson M.G., 2006: Plant systematics, Elsevier Academic Press.
- Heywood, V., 1995: Cvetnice. Kritosemenke sveta. DZS, Ljubljana.
- Martinčič, A. (ed.), 2007: Mala flora Slovenije. Tehniška založba, Ljubljana.
- Mauseth, J. D., 2014: Botany. An introduction to Plant Biology. Jones and Bartlett Publishers, Massachusetts.

Cilji in kompetence:

- Študenti se seznanijo s
- funkcionalno strukturo celice
 - strukturo in funkcijo tkiv in organov v luči filogenije rastlin
 - razvojem organov skozi evolucijo
 - bistvom in načini spolnega razmnoževanja skozi filogenetski razvoj rastlin.
 - rastlinsko sistematiko, posebej še v luči filogenetskega razvoja.

Objectives and competences:

- Students get familiar with
- the structure and functioning of cell
 - the structure and functioning of tissues in the light of plant phylogeny
 - the development of plant organs through the evolution
 - the principles and diversity of reproduction through the phylogeny of plants
 - the plant systematics, especially in the light of their phylogeny.

Predvideni študijski rezultati:

- Znanje in razumevanje:
Študenti znajo
- povezati zgradbo z delovanjem rastlinske celice
 - primerjati strukturo in funkcijo rastlinskih tkiv skozi filogenetski razvoj rastlin
 - opisati razvoj organov skozi evolucijo
 - pojasniti bistvo in opisati načine spolnega razmnoževanja skozi filogenetski razvoj rastlin

Intended learning outcomes:

- Knowledge and understanding:
Students are able to
- link the structure and function of plant cell
 - compare the structure and function of plant tissues through the phylogenetic development of plants
 - describe the development of plant organs through evolution
 - explain the essence and describe ways of

● navesti lastnosti rastlin, ki so bile pomembne v luči filogenetskega razvoja.

sexual reproduction through the phylogenetic development of plants
● state the properties of plants that were important in the light of phylogenetic development.

Metode poučevanja in učenja:

- Predavanja
- Seminarji
- Laboratorijske vaje

Learning and teaching methods:

- Lectures
- Seminars
- Laboratory work

Načini ocenjevanja:

- Seminarska naloga in predstavitev
- Pisni izpit
- Praktični kolokvij iz vaj

Delež (v %) /

Weight (in %)

Assessment:

- Seminar essay and its presentation
- Written examination
- Written practical examination

Reference nosilca / Lecturer's references:

ŠKORNIK, Sonja, PIPENBAHER, Nataša. Primerjava funkcionalnih potez dominantnih in podrejenih rastlinskih vrst v suhih travniških asociacije Scabioso hladnikiana-Caricetum humilis v Sloveniji = Relationship in plant functional traits between dominant and subordinate plant species in dry grassland association Scabioso hladnikiana-Caricetum humilis in Slovenia. *Hladnikia*, ISSN 1318-2293. [Tiskana izd.], apr. 2018, [Št.] 41, str. 26-41.

UNUK, Tina, PIPENBAHER, Nataša, ŠKORNIK, Sonja. Trophic-level differences in functional composition of the Nardus grassland vegetation. *Plant Biosystems*, ISSN 1126-3504, 2018, str. 1-7,

JAGODIČ, Mojca, ŠKORNIK, Sonja. Lastnosti populacije in ekološke razmere na rastišču vrste *Asplenium adulterinum* Milde v Sloveniji = Population characteristics and ecological conditions in habitat of *Asplenium adulterinum* Milde in Slovenia. *Hladnikia*, ISSN 1318-2293. [Tiskana izd.], nov. 2017, [Št.] 40, str. 51-60,

ŠKORNIK, Sonja, MEZNARIČ, Marija, KALIGARIČ, Mitja. Factors affecting composition of gravel bar vegetation in middle reach of a lowland river. *Polish journal of ecology*, ISSN 1505-2249, 2017, vol. 65, iss. 2, str. 194-210.

BATALHA, Marco Antônio, PIPENBAHER, Nataša, BAKAN, Branko, KALIGARIČ, Mitja, ŠKORNIK, Sonja. Assessing community assembly along a successional gradient in the North Adriatic Karst with functional and phylogenetic distances. *Oecologia : in cooperation with the International association for ecology (Intecol)*, ISSN 0029-8549, 2015, vol. 178, iss. 4, str. 1205-1214.