



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 <sup>nd</sup> cycle	/	1st	1st

**Vrsta predmeta / Course type**

Obvezni / Compulsory

**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:**

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:**

**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, P. Nick, U. Sonnewald, 2021: Strasburger - Lehrbuch der Pflanzenwissenschaften. Springer Spektrum, 38. 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

### 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

- pojasniti bistvo in opisati načine spolnega razmnoževanja skozi filogenetski razvoj rastlin
- navesti lastnosti rastlin, ki so bile pomembne v luči filogenetskega razvoja.

- describe the development of plant organs through evolution
- explain the essence and describe ways of 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:

- Seminarjska 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, PAUŠIČ, Igor, NOVAK, Tone, JANŽEKOVIČ, Franc, IVAJNŠIČ, Danijel, TOSTOVRŠNIK, Mihaela, KOZEL, Peter. Environmental factors influencing the distribution of habitat types in the highlands of the Kamnik - Savinja Alps. *Plant Biosystems*. 2022, vol. 156, no. 3, str. 710-721.

JEVŠNIK, Ema, PIPENBAHER, Nataša, ŠKORNIK, Sonja. Vpliv paše divjadi v oborah na vrstno pestrost in sestavo polnaravnih suhih travšč navadne turške detelje in pokončnega stoklasca (*Onobrychido viciifoliae-Brometum*) = Effect of permanent game grazing on species diversity and the composition of semi-natural dry grassland of the association *Onobrychido viciifoliae-Brometum*. *Zlatorogov zbornik*. 2020, letn. 7, št. 7, str. 66-76.

ŠKORNIK, Sonja, PIPENBAHER, Nataša. Primerjava funkcionalnih potez dominantnih in podrejenih rastlinskih vrst v suhih travščih 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,