



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Izbrana poglavja iz botanike
Course title:	Selected Topics in Botany

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Doktorski študij Ekološke znanosti, 3. stopnja	EKOLOŠKE ZNANOSTI	1. ali 2.;	1.- 4.;
Doctoral Study Ecological Sciences, 3rd degree	ECOLOGICAL SCIENCES	1st or 2nd	1st-4th

Vrsta predmeta / Course type: Izbirni/Elective

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Lab. vaje Laboratory work	Terenske vaje Field work	Samost. delo Individ. work	ECTS
10	10		5	5	150	6

Nosilec predmeta / Lecturer: Mitja Kaligarič

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti: Jih ni.
Prerequisites: None.

Vsebina:

Obravnavana so izbrana poglavja iz naslednjih Sklopov:

- Kemična sestava rastlinske celice
- Citologija: funkcionalna struktura celice
- Delitev celice: mitoz, mejoza
- Histologija: funkcionalna struktura tkiv
- Rastlinski organi
- Razmnoževanje, rast in osnove dednosti
- Pregled sistema nižjih rastlin

Content (Syllabus outline):

Selected topics in the following chapters are discussed.

- Chemical structure of plant cell
- Cytology: cell functional structure
- Cell division: mitosis, meiosis
- Histology: functional structure of tissues
- Plant organs
- Reproduction, growth and principles of heredity

- Pregled sistema višjih rastlin

- Survey of the system of lower plants
- Survey of the system of higher plants

Temeljni literatura in viri / Readings:

- Bresinsky, A., Körner, C., Kadereit, J.W., Neuhaus, G., Sonnewald, U., 2013: Strasburger's Plant Sciences. Springer Verlag.
- Mauseth, J. D., 2016: Botany. An introduction to Plant Biology. Jones and Bartlett Publishers, Massachusetts.
- Raven, P. H., Evert, R. F., Eichhorn, S. E., 1912: Biology of Plants. W. H. Freeman and company Worth Publishers. 8th edition.
- Sitte, P., Weiler, E. W., Kadereit, J. W., Bresinsky, A., Körner, C., 2002: Lehrbuch der Botanik. 35. Auflage. Spektrum Akademischer Verlag Heidelberg, Berlin.

Cilji in kompetence:

- Poznati kemično zgradbo rastlin
- Razumeti funkcionalno strukturo celice
- Razumeti delitev celice
- Razumeti strukturo in funkcijo tkiv in organov
- Razumevanje razmnoževanja, rasti in osnov dedovanja
- Poznati pregled in razmnoževalne cikle nižjih rastlin
- Poznati pregled in razmnoževalne cikle višjih rastlin

Objectives and competences:

- To learn the chemical structure of plants
- To understand the structure and functioning of cell
- To understand the cell division
- To understand the structure and functioning of tissues and organs
- To understand the reproduction, growth and principles of heredity
- To learn the plant system of lower plants and their life cycles
- To learn the plant system of higher plants and their life cycles

Predvideni študijski rezultati:

Znanje in razumevanje:

- Študent dobi vpogled v osnovno razumevanje zgradbe in delovanja rastlinske celice, tkiv in organov.
- Študent se seznanja s povezanostjo med strukturo in funkcijo in biotsko pestrostjo.
- Pozna filogenijo in raznolikost rastlinskega sveta

Prenosljive/ključne spretnosti in drugi atributi:

- Študent osvoji nekaj glavnih metod in pridobi prakso v prepoznavanju in

Intended learning outcomes:

Knowledge and understanding:

- Student should get an overview and basic understanding of plant cell, tissues and organs.
- Student should link the structure and function with biodiversity.
- Student should understand the plant phylogeny and get an overview into plant diversity

Transferable/Key Skills and other attributes:

- Student capture the most important methods and practices in recognition

- delovanju celic, tkiv in organov rastlinskih organizmov
- Študent prepozna glavne skupine rastlinskih organizmov.

- and functioning of plant cells, tissues and organs.
- Student can recognise the key groups of plant organisms.

Metode poučevanja in učenja:

Learning and teaching methods:

Predavanja
Seminar
Terenske vaje
Laboratorijske vaje

Lectures
Seminar work
Field work
Laboratory work

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

Seminarska naloga in zagovor iz laboratorijskih in terenskih vaj. Pisni izpit.	50 50	Seminar essay and discussion on laboratory and field exercises. Written exam.
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Reference nosilca / Lecturer's references:

IVAJSIČ, Danijel, ŠAJNA, Nina, KALIGARIČ, Mitja. Primary succession on re-created coastal wetland leads to successful restoration of coastal halophyte vegetation. *Landscape and urban planning*, ISSN 0169-2046. [Print ed.], 2016, vol. 150, str. 79-86

KALIGARIČ, Mitja, IVAJSIČ, Danijel. Vanishing landscape of the "classic" Karst : changed landscape identity and projections for the future. *Landscape and urban planning*, ISSN 0169-2046. [Print ed.], 2014, vol. 132, str. 148-158

IVAJSIČ, Danijel, KALIGARIČ, Mitja. How to preserve coastal wetlands, threatened by climate change-driven rises in sea level. *Environmental management*, ISSN 0364-152X, 2014, vol. 54, iss. 4, str. 671-684

KALIGARIČ, Mitja, CULIBERG, Metka, KRAMBERGER, Branko. Recent vegetation history of the North Adriatic grasslands : expansion and decay of an anthropogenic habitat. *Folia geobot.*, June 2006, 41, 3, str. 241-258.

KALIGARIČ, Mitja, SEDONJA, Jožef, ŠAJNA, Nina. Traditional agricultural landscape in Goričko Landscape Park (Slovenia) : distribution and variety of riparian stream corridors and patches. *Landsc. urban plan.* [Print ed.], 21 March 2008, vol. 85, iss. 1, str. 71-78, ilustr

IVAJSIČ, Danijel, KALIGARIČ, Mitja, FANTINATO, Edy, DEL VECCHIO, Silva, BUFFA, Gabriella. The fate of coastal habitats in the Venice Lagoon from the sea level rise perspective. *Applied geography*, ISSN 0143-6228. [Print ed.], 2018, vol. 98, str. 34-42, ilustr., doi: 10.1016/j.apgeog.2018.07.005. [COBISS.SI-ID 24006152]

PAUŠIČ, Igor, KALIGARIČ, Mitja. Dry grassland land use treatment regime explains the occurrence of the green winged orchid, *Anacamptis morio* (L.) R. M. Bateman, Pridgeon & M. W. Chase in the Goričko Nature Park, NE Slovenia = Režim upravljanja s suhimi travišči določa pojavnost navadne

kukavice, *Anacamptis morio* (L.) R. M. Bateman, Pridgeon & M. W. Chase v Krajinskem parku Goričko, SV Slovenija. *Folia biologica et geologica*, ISSN 1855-7996. [Tiskana izd.], 2015, letn. 56, št. 3, str. 137-148, ilustr. [COBISS.SI-ID [22114312](#)]

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, doi: [10.1007/s00442-015-3295-5](https://doi.org/10.1007/s00442-015-3295-5). [COBISS.SI-ID [21281800](#)]