



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.; 1st or 2nd	1.- 4.; 1st-4th
Doctoral Study Ecological Sciences, 3rd degree	ECOLOGICAL SCIENCES		

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: /
Prerequisites: /

Vsebina:

Obraavnavana so izbrana poglavja iz naslednjih Sklopov:

- Kemična sestava rastlinske celice
- Citologija: funkcionalna struktura celice
- Delitev celice: mitotična, 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:

- Raven, P. H., Evert, R. F., Eichhorn, S. E., 2013 (8. Izdaja): Biology of Plants. W. H. Freeman and company Worth Publishers.
- Sitte, P., Weiler, E. W., Kadereit, J. W., Bresinsky, A., Körner, C., 2002: Lehrbuch der Botanik. 35. Auflage. Spektrum Akademischer verlag Heidelberg, Berlin.
- Kadereit, J. W., Bresinsky, A., Körner, C., Neuhaus, G., Sonnewald, U., 2013: Strassburger's Plant Science. Springer.

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.
- Razume povezanost med strukturo in funkcijo in biotsko pestrostjo.
- Pozna filogenijo in raznolikost rastlinskega sveta

Prenesljive/ključne spretnosti in drugi atributi:

- Študent osvoji nekaj glavnih metod 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:

pridobi prakso v prepoznavanju in delovanju celic, tkiv in organov rastlinskih organizmov

- Študent prepozna glavne skupine rastlinskih organizmov.

- Student capture the most important methods and practices in recognition and functioning of plant cells, tissues and organs.
- Student can recognise the key groups of plant organisms.

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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 terenskih vaj	50	Seminar essay and discussion on field exercises (precondition for the examination)
Pisni izpit	50	Written exam

Reference nosilca / Lecturer's references:

MASON, Norman W. H., PIPENBAHER, Nataša, ŠKORNIK, Sonja, KALIGARIČ, Mitja. Does complementarity in leaf phenology and inclination promote co-existence in a species-rich meadow? : evidence from functional groups. *Journal of vegetation science*, ISSN 1100-9233. [Print ed.], Jan. 2013, vol. 24, iss. 1, str. 94-100

AMBROŽIČ-DOLINŠEK, Jana, CIRINGER, Terezija, KALIGARIČ, Mitja. Micropropagation of the narrow endemic *Hladnikia pastinacifolia* (Apiaceae). *Acta botanica Croatica*, ISSN 0365-0588, 2016, vol. 75, iss. 2, str. 244-252

IVAJSKIČ, 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, ilustr