



Univerza v Mariboru



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*Fakulteta za naravoslovje in
matematiko*

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet: Temelji splošne botanike

Course title: Fundamentals of general botany

Študijski program in stopnja

Študijska smer

Letnik

Semester

Study programme and level

Study field

Academic year

Semester

Univerzitetni program 1. stopnje Ekologija z naravovarstvom / EKNA		1	1
University programme first level Ecology with nature conservation/EKNA		1	1

Vrsta predmeta / Course type

Obvezni / Obligatory

Univerzitetna koda predmeta / University course code:

Predavanja	Seminar	Sem. vaje	Lab. vaje	Teren. vaje	Samost. delo	ECTS
Lectures	Seminar	Tutorial	Laboratory work	Field work	Individ. work	

30			30		120	6
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Nosilec predmeta / Lecturer:

Mitja KALIGARIČ

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:

- Kemična sestava rastlinske celice
- Citologija: funkcionalna struktura celice
- Delitev celice: mitotična, mejoza
- Histologija: funkcionalna struktura tkiv
- Rastlinski organi
- Razmnoževanje, rast in osnove dednosti

Content (Syllabus outline):

- 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

Temeljni literatura in viri / Readings:

- Mauseth, J. D., 2003: Botany. An introduction to Plant Biology. Jones and Bartlett Publishers, Massachusetts.
- Raven, P. H., Evert, R. F., Eichhorn, S. E., 1999: 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.

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

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

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.
Prenesljive/ključne spretnosti in drugi atributi:
• Študent osvoji nekaj glavnih metod in pridobi prakso v prepoznavanju in delovanju celic, tkiv in organov rastlinskih organizmov.

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.
Transferable/Key Skills and other attributes:
• Student capture the most important methods and practices in recognition and functioning of plant cells, tissues and organs.

Metode poučevanja in učenja:

• Predavanja • Laboratorijske vaje

Learning and teaching methods:

• Lectures • Laboratory exercises
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Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

• Praktični kolokvij iz laboratorijskega dela • Ustni zagovor laboratorijskega dela • Pisni izpit	30	• Practical examination of laboratory skills • Oral examination of laboratory skills • Written examination
	20	
	50	

Reference nosilca / Lecturer's references:

• TUBA, Zoltán, KALIGARIČ, Mitja. Grassland ecology in changing climate and land use. Community ecol. (Print), 2008, vol. 9, suppl. 1, str. 3-12. http://dx.doi.org/10.1556/ComEc.9.2008.S.3, doi: 10.1556/ComEc.9.2008.S.3. [COBISS.SI-ID 16601096] • ŠKORNIK, Sonja, ŠAJNA, Nina, KRAMBERGER, Branko, KALIGARIČ, Simona, KALIGARIČ, Mitja. Last remnants of riparian wooded meadows along the middle Drava River (Slovenia) : species composition is a response to light conditions and management. Folia geobot., dec. 2008, vol. 43, no. 4, str. 431-445. http://dx.doi.org/10.1007/s12224-008-9024-7, doi: 10.1007/s12224-008-9024-7. [COBISS.SI-ID 16419336]
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- FRAJMAN, Božo, KALIGARIČ, Mitja. *Dittrichia graveolens*, nova tujerodna vrsta slovenske flore = *Dittrichia graveolens*, a new alien species of the Slovenian flora. *Hladnikia* (Ljubl.), 2009, št. 24, str. 35-43. [COBISS.SI-ID 16943112]
- PIPENBAHER, Nataša, KALIGARIČ, Mitja, ŠKORNIK, Sonja. Floristic and functional comparison 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, ilustr. <http://carsologica.zrc-sazu.si/downloads/403/Pipenbaher.pdf>. [COBISS.SI-ID 18878216]
- 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, ilustr. [COBISS.SI-ID 18617608]