



Univerza v Mariboru

Fakulteta za naravoslovje  
in matematiko

### UČNI NAČRT PREDMETA / COURSE SYLLABUS

<b>Predmet:</b>	Splošna botanika
<b>Course title:</b>	General Botany

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Univerzitetni študijski program Biologija, 1. stopnja		1.	1.
Undergraduate university programme Biology, 1st degree		1st	1st

Vrsta predmeta / Course type:

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Lab. Vaje Laboratory work	Teren. Vaje Field work	Samost. delo Individ. work	ECTS
45			45		90	6

Nosilec predmeta / Lecturer:

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

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

Prerequisites:

Vsebina:

Content (Syllabus outline):

1. Kemična sestava rastlinske celice
2. Citologija: funkcionalna struktura celice
3. Delitev celice: mitozna, mejoza
4. Histologija: funkcionalna struktura tkiv
5. Rastlinski organi: korenina, steblo, list, cvet
6. Razmnoževanje, rast in osnove dednosti

1. Chemical structure of plant cell.
2. Cytology: cell functional structure.
3. Cell division: mitosis, meiosis.
4. Histology: functional structure of tissues.
5. Plant organs: root, stem, leaf, flower
6. Reproduction, growth and principles of heredity.

### 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:

1. Poznati kemično zgradbo rastlin
2. Razumeti funkcionalno strukturo celice
3. Razumeti delitev celice
4. Razumeti strukturo in funkcijo tkiv in organov
5. Razumevanje razmnoževanja, rasti in osnov dedovanja

### Objectives and competences:

1. To learn the chemical structure of plants.
2. To understand the structure and functioning of cells.
3. To understand the cell division.
4. To understand the structure and functioning of tissues and organs.
5. 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.

Študent obvlada povezanost med strukturo in funkcijo in biotsko pestrostjo.

#### Prenosljive/ključne spretnosti in drugi atributi:

Študent usvoji nekaj glavnih metod priprave preparatov in pridobi prakso v prepoznavanju

### 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 of preparing the microscope slides and practices

in delovanju celic, tkiv in organov rastlinskih organizmov.

in recognition and functioning of plant cells, tissues and organs.

**Metode poučevanja in učenja:**

Predavanja  
Laboratorijske vaje

**Learning and teaching methods:**

Lectures  
Laboratory exercises

Delež (v %) /

**Načini ocenjevanja:**

Weight (in %)

**Assessment:**

Kolokvij iz vaj (pogoj za pristop k izpitu): praktični del – prepoznavanje mikroskopskih preparatov in ustni zagovor Pisni izpit	<b>50</b> <b>50</b>	Examination of exercises (precondition for examination): practical part – recognising the microscopic slides and oral defence of the practical part. Written examination
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**Reference nosilca / Lecturer's references:**

ŠAJNA, Nina, ŠUŠTAR VOZLIČ, Jelka, KALIGARIČ, Mitja. New insights into the anatomy of an endemic *Hladnikia pastinacifolia* Rchb. *Acta botanica Croatica : an international journal of botany*, ISSN 0365-0588, 2014, vol. 73, no. 2, str. 375-384, ilustr., doi: [10.2478/botcro-2014-0005](https://doi.org/10.2478/botcro-2014-0005). [COBISS.SI-ID [20902152](https://www.cobiss.si/id/20902152)]

PAUŠIČ, Igor, IVAJNŠIČ, Danijel, KALIGARIČ, Mitja, PIPENBAHER, Nataša. Relation between plant species diversity and landscape variables in Central-European dry grassland fragments and their successional derivatives. *Acta botanica Croatica : an international journal of botany*, ISSN 0365-0588, 2017, vol. 76, iss. 2, str. 111-119, ilustr. <https://www.degruyter.com/view/j/botcro.ahead-of-print/botcro-2017-0001/botcro-2017-0001.xml?format=INT>, doi: [10.1515/botcro-2017-0001](https://doi.org/10.1515/botcro-2017-0001). [COBISS.SI-ID [23132168](https://www.cobiss.si/id/23132168)]

KOŽUH, Aljaž, KALIGARIČ, Mitja, IVAJNŠIČ, Danijel. Potential distribution of silver fir (*Abies alba*) in south-eastern Alpine and Dinaric phytogeographic regions of Slovenia and Croatia in the light of climate change. *Annales : anali za istrske in mediteranske študije, Series historia naturalis*, ISSN 1408-533X. [Tiskana izd.], 2017, letn. 27, št. 2, str. 97-106, ilustr., doi: [10.19233/ASHN.2017.12](https://doi.org/10.19233/ASHN.2017.12). [COBISS.SI-ID [24005896](https://www.cobiss.si/id/24005896)]

PAUŠIČ, Igor, KALIGARIČ, Mitja, BAKAN, Branko. Late seasonal mowing enhances central European *Spiranthes spiralis* (L.) Chevall. (Orchidaceae) population viability. *Botany Letters*, ISSN 2381-8107, 2017, str. 1-12, ilustr., doi: [10.1080/23818107.2017.1396495](https://doi.org/10.1080/23818107.2017.1396495). [COBISS.SI-ID [23469064](https://www.cobiss.si/id/23469064)]

KALIGARIČ, Mitja, BRECL, Jožica, ŠKORNIK, Sonja. High potential of sub-Mediterranean dry grasslands for sheep epizoochory. *Open life sciences : formerly Central European journal of biology*, 2016, vol. 11, iss. 1, str. 177-184, doi: [10.1515/biol-2016-0023](https://doi.org/10.1515/biol-2016-0023). [COBISS.SI-ID [22605576](https://www.cobiss.si/id/22605576)]

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](#)]