



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Fitocenologija
Course title:	Phytocenology

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija, 1. stopnja		2.	4.
Biology, 1st cycle		2 nd	4 th

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
15	15	15			135	6

Nosilec predmeta / Lecturer:

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

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

Jih ni.

Prerequisites:

No prerequisites.

Vsebina:

Content (Syllabus outline):

Fitocenologija je veda o rastlinskih združbah/tipih vegetacije, o njihovi sestavi, razmerju do okolja, razvoju in razširjenosti v času in prostoru. Je hkrati tudi veda, ki se ukvarja z uvrščanjem rastlinskih združb v sistem rastlinskih združb (t.i. sinsistem).

Rastlinske združbe (tipi vegetacije) so osnova, na katerih so definirani habitatni tipi, poznavanje habitatnih tipov na določenem območju pa je osnova oblikovanja območij varovanja narave npr. NATURA 2000 območij, krajinskih parkov inp.

V okviru predmeta bodo predstavljeni:

- osnovni koncepti in definicije v fitocenologiji in zgodovina nastanka in razvoja vede.
- Obravnavane bodo metodologije vzorčenja, obdelave vegetacijskih podatkov in oblikovanja Sistema rastlinskih združb.
- Študenti se bodo seznanili s pglavitnimi tipi rastlinskih združb v Sloveniji.
- Posebej bodo predstavljene ogrožene rastlinske združbe (in habitatni tipi) v Sloveniji: vzroki za ogroženost, njihovo varovanje in upravljanje z njimi. Znanja, pridobljena na predavanjih, bodo študenti utrdili in poglobili na seminarjih in pri terenskem pouku.

Phytocoenology is the study of the plant communities, their structure, relationship with environment, development and their distribution in time and space. It is also study, which deals with the classification of plant communities in synsystem. Plant communities (vegetation types) are also basis for habitat types categorization, knowledge of habitat types in a given area is basis for designation of special areas of nature conservation as Natura 2000 area or landscape park etc. In the frame of this subject:

- the basic concepts and definitions in phytocoenology will be presented and also the history of its development.
 - The methodologies for sampling and analyzing the vegetation data as well as for the creation of synsystem of pant communities will be presented and discussed.
 - Students will make acquaintance with the principal types of plant communities in Slovenia
 - Plant communities (and habitat types) at risk in Slovenia will be presented: main reasons for their endargement, their conservation and management.
- The knowledge acquired on lectures will be used on seminars and field work.

Temeljni literatura in viri / Readings:

Temeljna literatura / Basic:

- Ellenberg, H., & Leuschner, C. (2010). Vegetation Mitteleuropas mit den Alpen: in ökologischer, dynamischer und historischer Sicht (Vol. 8104). Utb.
- Gurevitch, J., Scheiner, S. M., & Fox, G. A. (2006). Community properties and mechanisms. The
- Keddy, P.A., 2007: Plant and vegetation, Cambridge University Press.

Priporočena literatura / Recommended:

- der Maarel, E. 2005: Vegetation Ecology, Blackwell publishing.ecology of plants, 2nd edn. Sinauer, Sunderland, 215-216.
- ter Braak CJF, Smilauer P. 2012: CANOCO Reference Manual and User's Guide: Software for Ordination. Version 5. Microcomputer Power Ithaca, New York.

Cilji in kompetence:

Študenti se seznanijo z

- osnovnimi definicijami v fitocenologiji,
- različnimi metodami za vzorčenje vegetacije,
- različnimi metodami za obdelavo vegetacijskih podatkov s poudarkom na modernih numeričnih metodah,
- rastlinskimi združbami Slovenije,
- najbolj ogroženimi tipi združb in na njih osnovanih habitatnih tipov v Sloveniji, njihovim varovanjem in upravljanjem z njimi.

Objectives and competences:

Students get familiar with

- the basic concept and definitions in phytocoenology,
- different methods for sampling of vegetation data,
- different methods for elaboration of vegetation data with main stress on modern numerical analysis,
- main plant communities in Slovenia,
- plant communities and habitat types at risk in Slovenia, their conservation and management.

Predvideni študijski rezultati:

Znanje in razumevanje:

Študenti znajo

- predstaviti osnovne pojme in definicije v fitocenologiji,
- opisati metode za vzorčenje vegetacije, uporabiti izbrane metode obdelave podatkov in uvrščanja rastlinskih združb v sistem rastlinskih združb.
- opisati osnovne tipev združb v Sloveniji.
- našteti najbolj ogrožene tipe vegetacije/habitatnih tipov v Sloveniji, razloge za njihovo ogroženost, predstaviti načine njihovega varovanja in upravljanja z njimi.

Intended learning outcomes:

Knowledge and understanding:

Students are able to

- present basic concepts and definitions in Phytocoenology,
- describe methodology for vegetation sampling, apply appropriate methods of vegetation data and classification of plant communities in the system,
- describe basic plant communities in Slovenia,
- list the most endangered types of vegetation in Slovenia, identify the reasons for their threat, present the ways for their conservation and management.

Metode poučevanja in učenja:

- Predavanja
- Seminarji
- Terenske vaje

Learning and teaching methods:

- Lectures
 - Seminars
 - Field work
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Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt) - Seminarska naloga in predstavitev - Pisni izpit	40 60	Type (examination, oral, coursework, project): - Seminar essay and its presentation - Written examination

Reference nosilca / Lecturer's references:

BIURRUN, Idoia, PIELECH, Remigiusz, DEMBICZ, Iwona, GILLET, François, KOZUB, Łukasz, MARCENÒ, Corrado, REITALU, Triin, VAN MEERBEEK, Koenraad, GUARINO, Riccardo, CHYTRÝ, Milan, PIPENBAHER, Nataša, **ŠKORNIK, Sonja**, et al. Benchmarking plant diversity of Palaeartic grasslands and other open habitats. *Journal of vegetation science*. [Online ed.]. Jul./Aug. 2021, vol. 32, iss. 4, 21 str., ilustr. ISSN 1654-1103.

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.

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