



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Izbrana poglavja iz gozdne vegetacije Slovenije
Course title:	Selected Topics in Forest vegetation of Slovenia

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

Vrsta predmeta / Course type

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
5				5	140	5

Nosilec predmeta / Lecturer:

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

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

Poznavanje rastlin, ekologije in biodiverzitet na ravni univerzitetnega programa

Prerequisites:

Knowledge of plants, ecology and biodiversity at graduate level

Vsebina:

Obravnavana so izbrana poglavja iz naslednjih sklopov.

Predmet se ukvarja z gozdno vegetacijo, predvsem s teorijo in metodami za njeno vzorčenje in obdelavo. Obdelovali bomo predvsem z gozdno vegetacijo Slovenije (floristično sestavo, biodiverzitetno, ekološkimi razmerami itd.), vključili pa bomo tudi

Content (Syllabus outline):

Selected topics in the following chapters are discussed.

Subject deals with forest vegetation of Slovenia, above all with theory and methods of investigation of vegetation. It considers above all forest types of Slovenia (their floristic composition, biodiversity, ecological circumstances etc.), Besides, it will be dealt

nekatero kontaktne negozdne vegetacijske tipe (npr. gozdne robove, poseke), ki se neposredno vključujejo v procese zaraščanja kulturne krajine. Poleg tega se bomo seznanili tudi z delom s velikimi podatkovnimi bazami in s sodobnimi metodami numerične obdelave podatkov ter vrednotenja rezultatov numeričnih analiz. Ukvarjali se bomo tudi s spremembami vegetacije v času in prostoru in z metodami za analizo teh sprememb.. Predmet temelji na standardni srednjeevropski (floristični) metodi za obdelavo vegetacije, vendar bomo pregledali in uporabili tudi druge metode.

with some non-forest communities (e.g. forest edges), that are directly involved in processes of reforestation of cultural landscape. We shall also get acquainted with large database, their elaboration and evaluation of results. We will deal with changes of vegetation cover in time and methods for their investigation and evaluation. The subject is based upon the standard central European (floristic) method, while other methods are applied and evaluated.

Temeljni literatura in viri / Readings:

- Čarni, A. 2005. Trifolio-Geranietaea vegetations in south and southeast Europe. *Acta botanica gallica*, 152(4), 483-496.
- Čarni, A., Košir, P., Marinšek, A., Šilc, U., & Zelnik, I. 2007. Changes in structure, floristic composition and chemical soil properties in a succession of birch forests. *Periodicum biologorum*, 109(1), 13-20.
- Čarni, A., Košir, P., Karadžić, B., Matevski, V., Redžić, S., & Škvorc, Ž. 2009. Thermophilous deciduous forests in Southeastern Europe. *Plant Biosystems*, 143(1), 1-13.
- Dierschke H. 1994. *Pflanzensoziologie. Grundlagen und Methoden*. Eugen Ulmer verlag, Stuttgart.
- Fischer A. 2003. *Forstliche Vegetationskunde*. Ulmer.
- Hennekens S.M., Schaminée J.H.J. 2001. Turboveg, a comprehensive data base management system for vegetation data. *Journal of vegetation science* 12: 589-591.
- Juvan, N., Košir, P., Marinšek, A., Paušič, A., & Čarni, A. 2013. Differentiation of the Piceetalia and Athyrio-Piceetalia forests in Slovenia. *Tuexenia* 33, 25-48.
- Košir, P., Casavecchia, S., Čarni, A., Škvorc, Ž., Zivkovic, L., & Biondi, E. 2013. Ecological and phytogeographical differentiation of oak-hornbeam forests in southeastern Europe. *Plant Biosystems-An International Journal Dealing with all Aspects of Plant Biology*, 147(1), 84-98.
- Košir, P., Čarni, A., Marinšek, A., & Šilc, U. 2013. Floodplain forest communities along the Mura River (NE Slovenia). *Acta Botanica Croatica*, 72(1), 71-95.
- Marinček L., Čarni A. 2000. Unterverbaende der Hainbuchenwaelder des verbandes Erythronio-Carpinion (Horvat 1938) Marinček in Wallnoefer, Mucina et Grass 1993. *Scoplia* 45: 1-20.
- Marinček, L., Čarni, A. 2002. Komentar k vegetacijski karti gozdnih združb Slovenije v merilu 1: 400.000. Založba ZRC, ZRC SAZU.
- Marinšek, A., Šilc, U., & Čarni, A. 2013. Geographical and ecological differentiation of Fagus forest vegetation in SE Europe. *Applied Vegetation Science*, 16(1), 131-147.

Paušič, A. & Čarni, A. 2012. Functional Response traits and plant community strategy indicate the stage of secondary succession. *Hacquetia*, 11(2), 209-225.

Schultze, E.D et al. 2005. *Plant Ecology*. Springer.

Šilc, U., & Čarni, A. 2012. Conspectus of vegetation syntaxa in Slovenia. *Hacquetia*, 11(1), 113-164.

Tichý L. 2002: Juice - software for vegetation classification. *Journal of Vegetation Science* 13: 451-453.

Vukelić J. 2012. Šumska vegetacija Hrvatske. Državni zavod za zaštitu prirode, Zagreb 2012

Zupančič M. 1999. Smrekovi gozdovi Slovenije. Dela SAZU.

Cilji in kompetence:

Podrobno spoznati teorijo in metode za obdelavo gozdne vegetacije
 Podroben pregled gozdnih združb v Sloveniji
 Podrobna obdelava podatkov o spremembah vegetacije v času in prostoru
 Kritična predstavitev različnih metod za preučevanje vegetacije

Objectives and competences:

Detail study of theory and methods of elaboration of forest communities
 Advances description of some forest and non forest types in Slovenia
 Elaboration of changes in vegetation in space and time
 Critical demonstration of various methods in vegetation investigation

Predvideni študijski rezultati:

Znanje in razumevanje:

Podobno spoznavanje teorije in metod za obdelavo gozdne vegetacije
 Podrobno proučevanje sprememb vegetacije v času in prostoru
 Podrobno proučevanje vegetacije kot kazalca za spremembe v okolju

Prenesljive/ključne spretnosti in drugi atributi:

Prepoznavanje združb na trenu
 Metodologija vzorčenja in obdelave
 Pridobivanje podrobnega teoretičnega in praktičnega znanja o gozdnih združbah
 Podrobno spoznavanje osnovnih tipov gozdne vegetacije Slovenije

Intended learning outcomes:

Knowledge and understanding:

Advances knowledge of theory and methods of elaboration of forest communities
 Advanced elaboration of changes of vegetation in space and time
 Advanced elaboration of vegetation as an indicator of changes in environment

Transferable/Key Skills and other attributes:

Detailed recognition of communities in the field
 Methodology of sampling and elaboration of vegetation
 Acquisition of detailed theoretical and practical knowledge of forest communities
 Detailed knowledge of basic forest communities

Metode poučevanja in učenja:**Learning and teaching methods:**

- Predavanja
- Terenske vaje
- Individualno, skupinsko delo
- Izdelava seminarske naloge

- Lectures
- Laboratory excersises
- Field excersises
- Individual, team work
- Preparation of essay

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

Seminarska naloga	30%	Seminar essay
Ustni kolokvij	30%	Oral partial exam
Pisni izpit	40%	Written exam

Reference nosilca / Lecturer's references:

KOŠIR, Petra, ČARNI, Andraž, MARINŠEK, Aleksander, ŠILC, Urban. Floodplain forest communities along the Mura River (NE Slovenia). *Acta botanica Croatica*, 2013, 72, 1, str. 71-95.

MARINŠEK, Aleksander, ŠILC, Urban, ČARNI, Andraž. Geographical and ecological differentiation of *Fagus* forest vegetation in SE Europe. *Applied vegetation science*, 2013, vol. 16, issue 1, str. 131-147.

KOŠIR, Petra, CASAVECCHIA, Simona, ČARNI, Andraž, ŠKVORC, Željko, ZIVKOVIC, Liliana, BIONDI, Edoardo. Ecological and phytogeographical differentiation of oak-hornbeam forests in southeastern Europe. *Plant Biosystems*, 2013, vol. 147, no. 1, str. 84-98.

JUVAN, Nina, KOŠIR, Petra, MARINŠEK, Aleksander, PAUŠIČ, Andrej, ČARNI, Andraž. Differentiation of the Piceetalia and Athyrio-Piceetalia forests in Slovenia. *Tuexenia*, 2013, vol. 33, str. 25-48.

KAVGACI, Ali, ARSLAN, Münevver, BINGÖL, Ümit, ERDOĞAN, Neslihan, ČARNI, Andraž. Classification and phytogeographical differentiation of oriental beech forests in Turkey and Bulgaria. *Biologia*, 2012, vol. 67, no. 3, str. 461-473.