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.- 4.; 1st-4th**
Doctoral Study Ecological Sciences, 3rd degree			

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
5		**5**		**20**	**150**	**6**

Nosilec predmeta / Lecturer:	Andraž Čarni

Jeziki / Languages:	**Predavanja / Lectures:**	slovenščina / Slovene
	Vaje / Tutorial:	slovenščina / Slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Poznavanje rastlin, ekologije in biodiverzitet na ravni univerzitetnega programa	Knowledge of plants, ecology and biodiversity at graduate level

Vsebina:	**Content (Syllabus outline):**
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, biodiverziteto, ekološkimi razmerami itd.), vključili pa bomo tudi	Selected topics in the following chapetrs 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

nekatere 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:

Temeljna literatura:

Preislerová, Z., Jiménez-Alfaro, B., Mucina, L., Berg, C., Bonari, G., Kuzemko, A., ... & Chytrý, M. (2022) Distribution maps of vegetation alliances in Europe. *Applied Vegetation Science*, 25(1), e12642. https://doi.org/10.1111/avsc.12642 (dostopno na https://onlinelibrary.wiley.com/doi/full/10.1111/avsc.12642)

Čarni A., Marinček L., Seliškar A. & Zupančič M. (2002) *Vegetacijska karta gozdnih združb Slovenije v merilu 1 : 400.000*. Založba ZRC, Ljubljana (s komentarjam). ISBN 961-6358-61-8. (dostopno v Univerzitetni knjižnici Maribor).

Čarni A. (2019) *Pregled gozdnih združb Slovenije. Učbenik za izbirni predmet Pregled gozdnih združb Slovenije,* FNM, Maribor. https://doi.org/ 10.18690/978-961-286-290-9 Dostopno na https://press.um.si/index.php/ump/catalog/book/430)

Janssen A. M. et al. (2016) *European Red List of Habitats - Part 2. Terrestrial and freshwater habitats.* Publication office of EU, Luxembourg. https://doi.org/10.2779/091372 (dostopno na https://op.europa.eu/en/publication-detail/-/publication/22542b64-c501-11e7-9b01-01aa75ed71a1/language-en)

Mucina L. et al. 2016. Vegetation of Europe: Hierarchical floristic classification system of vascular plant, bryophyte, lichen, and algal communities. *Applied Vegetation Science*., 19, 3–264. https://doi.org/10.1111/avsc.12257 (dostopno na https://onlinelibrary.wiley.com/doi/10.1111/avsc.12257)

Šilc, U., & Čarni, A. 2012. Conspectus of vegetation syntaxa in Slovenia. *Hacquetia*, 11, 113–164. https://doi.org/10.2478/v10028–012–0006–1. (dostopno na https://ojs.zrc-sazu.si/hacquetia/article/view/2874)

Dodatna litertura:

Leuschner C. & Ellenberg H. (2010). *Ecology of Central European forests*. Springer.

Chytrý, M., Tichý, L., Hennekens, S. M., Knollová, I., Janssen, J. A. M., Rodwell, J. S., Peterka, T., Marcenò, C., Landucci, F., Danihelka, J., Hájek, M., Dengler, J., Novák, P., Zukal, D., Jiménez-Alfaro, B., Mucina, L., Abdulhak, S., Aćić, S., Agrillo, E., … Schaminée, J. H. J. (2020). EUNIS habitat

classification: Expert system, characteristic species combinations and distribution maps of European habitats. *Applied Vegetation Science*, 23(4), 648–675. doi: 10.1111/avsc.12519
Tichý, L., Chytrý, M., & Landucci, F. (2019). GRIMP: A machine-learning method for improving groups of discriminating species in expert systems for vegetation classification. *Journal of Vegetation Science*, 30(1), 5–17. doi: 10.1111/jvs.12696

Cilji in kompetence:	**Objectives and competences:**
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	Detail study of theory and methods of elaboration of forest communties Advances description of some forest and non forest types in Slovenia Elaboration of changes in vegetation in space and time Kritical demonstation of various methods in vegetation investigation

Predvideni študijski rezultati:	**Intended learning outcomes:**
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 Metologija vzorčenja in obdelave Pridobivanje podrobnega teoretičnega in praktičenga znanja o gozdnih združbah Podrobno poznavanje osnovnih tipov gozdne vegetacije Slovenije	**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 • Terensko delo • Pripava seminarske naloge	• Lectures • Field work • Preparation of essay

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**

Ustni izpit Seminarska naloga	50 50	Oral exam Seminar paper

Reference nosilca / Lecturer's references:

Čahojová, L., Jakob, A., Breg Valjavec, M., Čarni, A. (2025) Response of vulnerable karst forest ecosystems under different fire severities in the northern dinaric karst mountains (Slovenia). *Fire Ecology*, 20, 1-17. https://doi.org/10.1186/s42408-024-00267-x.

Jakob, A., Breg Valjavec, M., Čarni, A. 2024. Determination of forest communities on the basis of small plots (microplots) within the geomorphologically diverse landscape of the kras plateau (Italy, Slovenia). *Forest Ecosystems*, 12, 100283. https://doi.org/10.1016/j.fecs.2024.100283.

Kavgaci, A., Karaköse, M.K., Emine S., Balpinar, N., Arslan, M., Yalçin, E., Novák, P., Čarni, A. 2023. Classification of forest and shrubland vegetation in central and eastern euxine turkey and sw georgia. *Applied Vegetation Science*, 26, e12753. https://doi.org/10.1111/avsc.12753.

Jakob, A., Breg Valjavec, M., Čarni, A. 2022. Turnover of plant species on an ecological gradient in karst dolines is reflected in plant traits : chorotypes, life forms, plant architecture and strategies. *Diversity*, 14, 597. https://doi.org/10.3390/d14080597.

Čarni, A., Čonč, Š., Breg Valjavec, M. 2022. Landform-vegetation units in karstic depressions (dolines) evaluated by indicator plant species and Ellenberg indicator values. *Ecological Indicators*, 135, 108572. https://doi.org/10.1016/j.ecolind.2022.108572.