



Univerza v Mariboru



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Fakulteta za naravoslovje in
matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Ekologija rastlin obmorskih habitatov
Course title:	Plant Ecology of Coastal Marine Habitats

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija in ekologija z naravovarstvom, 2.stopnja		1. ali 2.	2 / 3
Biology and ecology with nature conservation, 2 nd level		1. or 2.	2 / 3

Vrsta predmeta / Course type Izbirni / Elective

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30			10	5	135	6

Nosilec predmeta / Lecturer: Prof. Mitja Kaligarič, Doc. Nina Šajna

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	Prerequisites:
Osnovno poznavanje flore in habitatnih tipov. Osnove iz ekologije rastlin.	Basic knowledge about flora and habitat types. Basic knowledge about plant ecology.

Vsebina: **Content (Syllabus outline):**

- Značilnosti obmorskih habitatov
- Ekološki gradienti od morja proti kopnemu
- Razširjenost vrst po gradientu
- Prilagoditve halofitov od semena do odrasle rastline
- Sobivanje vrst
- Obmorski habitatni tipi in združbe halofitov

- Characteristics of coastal marine habitats
- Coastal ecological gradients
- Species distribution along gradient
- Adaptations of halophytes from seed to mature plant
- Species coexistence
- Coastal marine habitat types and halophyte communities

Temeljni literatura in viri / Readings:

- Jogan, N., M. Kaligarič, M., I. Leskovar, A. Seliškar, J. Dobravec, 2004: Habitatni tipi Slovenije HTS 2004. Tipologija. Agencija republike Slovenije za okolje. Ljubljana.
- Ungar, I. A., 1991: Ecophysiology of vascular halophytes. CRC Press, Boca Ranton.
- Little, C., Williams, G.A., Trowbridge, C.D., 2009: The Biology of Rocky Shores. Oxford University Press.
- Maun, M.A., 2009: The Biology of Coastal Sand Dunes. Oxford University Press.

Dodatna literatura/ Additional literature:

- Rdeči sezname ogroženih rastlinskih vrst

Cilji in kompetence:

- Pregled osnovnih značilnosti posameznih obmorskih habitatov
- Spoznati raznolikost obmorskih habitatov
- Razvrstitev habitatov v habitatne tipe ter kategorizacija glede na rastlinske združbe
- Razumevanje različnih ekoloških gradientov, ki so prisotni in njihov vpliv na razširjenost posameznih halofitnih vrst
- Poznavanje osnovnih prilagoditev halofitov na nivoju semena, anatomije, morfologije in na funkcionalnem nivoju
- Razumevanje dejavnikov, ki omogočajo sobivanje vrst vzdolž gradienta
- Spoznati pestrost obmorskih habitatov in njihovo prisotnost na slovenski obali

Objectives and competences:

- Overview of basic characteristics of coastal marine habitats
- Gain knowledge about marine coastal habitat diversity
- Categorization of habitats according to habitat types and plant communities
- Understanding of various ecological gradients present and their influence on distribution of halophytes
- Knowledge about adaptations of halophytes on the level of seeds to anatomy, morphology and functional level of adult plant
- Understanding of factors which enable species coexistence along gradients
- Gain the knowledge about biodiversity of coastal marine habitats and their presence

Predvideni študijski rezultati:

Intended learning outcomes:

Znanje in razumevanje:
 Študentje poznajo različne obmorske habitate s poudarkom na habitatih, ki se pojavljajo na slovenski obali. Spoznajo osnovno habitatno tipologijo in rastlinske združbe halofitov. Vedo kateri dejavniki vplivajo na vzorce pojavljanja halofitov vzdolž gradienta. Spoznajo prilagoditve halofitov od posebnosti pri kalitvi semen do anatomske zgradbe in funkcionalnega nivoja odraslih rastlin.

Knowledge and understanding:
 Students are familiar with various coastal habitats, especially with those present at the Slovenian coast. They are familiar with basic habitat typology and halophyte communities. They know which main factors influence the distribution patterns of halophytes along the gradient. They are familiar with halophytes' adaptations from specific seed germination characteristics to anatomical structure and functional level of mature plants.

Metode poučevanja in učenja:

- Predavanja
- Terenske vaje
- Laboratorijske vaje

Learning and teaching methods:

- Lectures
- Field work
- Laboratory work

Delež (v %) /
 Weight (in %)

Načini ocenjevanja:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)

- Pisni izpit

100%

Assessment:

Type (examination, oral, coursework, project):

- Written exam

Reference nosilca / Lecturer's references:

- KALIGARIČ, Mitja, BOHANEČ, Borut, SIMONOVIK, Biljana, ŠAJNA, Nina. Genetic and morphologic variability of annual glassworts (*Salicornia* L.) from the Gulf of Trieste (Northern Adriatic). *Aquat. bot.*. [Print ed.], 2008, vol. 89, iss. 3, str. 275-282.
- KALIGARIČ, Mitja, ŠKORNIK, Sonja. Vegetation of tall rush saltmarshes (*Juncetia maritima*) and saltmarsh scrubs (*Arthrocnemum fruticosum*) on the Slovenian seacoast. *Ann, Ser. hist. nat.*, 2007, letn. 17, št. 1, str. 47-58.
- KALIGARIČ, Mitja, ŠKORNIK, Sonja. Halophile vegetation of the Slovenian seacoast : *Thero-Salicornietea* and *Spartinetea maritima*. *Hacquetia*, 2006, letn. 5, št. 1, str. 25-36.
- ŠAJNA, Nina, KALIGARIČ, Mitja. Vegetation of the Stjuža coastal lagoon in Strunjan landscape park (Slovenia) : a draft history, mapping and nature-conservancy evaluation. *Ann, Ser. hist. nat.*, 2005, vol. 15, no. 1, str. 79-90.