



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Varstvena biologija
Course title:	Conservation Biology

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.	2
Biology and Ecology with Nature Conservation 2nd degree		1.	2

Vrsta predmeta / Course type

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	15			30	105	6

Nosilec predmeta / Lecturer:

Jeziki / Languages:

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

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

Jih ni.	Prerequisites: None.
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Vsebina:

- Osnove varstvene biologije
- Koncept vrst in varstvena biologija
- Globalna in regionalna pestrost organizmov
- Izguba in ogrožanje biodiverzitete
- Monitoring biodiverzitete
- Upravljanje z naravnimi habitati
- Upravljanje z vrstami
- Trajnost in upravljanje s polnaravnimi habitati
- Ekološko restavriranje

Content (Syllabus outline):

- Principles of conservation biology
- The species concept and conservation biology
- Global and regional biodiversity
- Losses and threats of biodiversity
- Monitoring of biodiversity
- Management of natural habitats
- Management of species
- Sustainability, and the management of semi natural habitats
- Ecological restoration

Temeljni literatura in viri / Readings:

- Hambler, C., 2004: Conservation. Cambridge University Press.
- Kryštufek, B., 1999: Osnove varstvene biologije. Tehniška založba Slovenije.
- Meffe, G. K., C. R. Carroll, 1997. Principles of conservation biology. Sinauer Associates.
- Primack, R., P., 2010: Essentials of Conservation Biology,
- Ausden M., 2007: Habitat Management for Conservation: A Handbook of Techniques. Oxford.
- Rannow S., Neubert M., 2014: Managing protected areas in Central and Eastern Europe under climate change, (Advances in global change research 58). Springer.
- Sodhi N.S., Ehrlich P.R., 2010: Conservation Biology for All. Oxford University press. (<http://www.conbio.org/publications/free-textbook>)

Dodatna literatura/ Additional literature:

- Revija/Journal:
 - Conservation Biology (Online ISSN: 1523-1739) – izbrani članki / selected articles
 - Biological Conservation (ISSN: 0006-3207; Elsevier) – izbrani članki / selected articles

Cilji in kompetence:

Poznavanje temeljev biodiverzitetnih procesov
 Poznavanje metod merjenja in spremljanja biodiverzitete
 Poznavanje postopkov upravljanja z naravnimi ter polnaravnimi habitati in vrstami

Objectives and competences:

Acquire elemental knowledge on biodiversity processes
 Knowledge of measuring methods and monitoring of biodiversity
 Knowledge of procedures of managing natural and semi-natural habitats and species

Predvideni študijski rezultati:

Znanje in razumevanje:
 Študenti usvojijo znanje o biodiverzitetnih procesih
 Znajo načrtovati, izvesti in vrednotiti monitoring biodiverzitete
 Razumejo postopke upravljanja habitatov, vrst Prenesljive/ključne spretnosti in drugi atributi:
 Sposobnost prepoznavanja in reševanja naravovarstvene problematike
 Sposobnost načrtovanja, izvajanja in vrednotenja biodiverzitetnega monitoringa
 Sposobnost upravljanja in presojanja vplivov na habitate in populacije posameznih vrst

Intended learning outcomes:

Knowledge and Understanding:
 Students:
 Acquire knowledge on biodiversity processes
 Know how to plan, execute and evaluate biodiversity monitoring.
 Understand procedures of habitat and species management
 Transferable/Key Skills and other attributes:
 Ability to recognize and solve nature conservation problems
 Ability to plan, execute and evaluate biodiversity monitoring
 Ability to provide management and judge the effects on habitats and populations of selected species

Metode poučevanja in učenja:

- Predavanja
- Seminarske vaje
- Terenske vaje

Learning and teaching methods:

- Lectures
- Seminar
- Field work

Načini ocenjevanja:

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

- Terensko delo (prisotnost, pisni test) pogoj za pristop k izpitu
- Seminarsko delo in predstavitev
- Pisni izpit

Delež (v %) /

Weight (in %)

20%
80%**Assessment:**

Type (examination, oral, coursework, project):

- Field work (attendance, written exam) mandatory for final exam
- Seminar work and presentation
- Written exam

Reference nosilca / Lecturer's references:

Dr. Nina Šajna

- ŠAJNA, Nina, KALIGARIČ, Mitja, IVAJNŠIČ, Danijel. (2014) Reproduction biology of an alien invasive plant : a case of drought-tolerant *Aster squamatus* on the Northern Adriatic seacoast, Slovenia. V: RANOW, Swen (ur.), NEUBERT, Marco (ur.). Managing protected areas in Central and Eastern Europe under climate change, (Advances in global change research, ISSN 1574-0919, vol. 58). Springer, 279-288.

- ŠAJNA, Nina, KAVAR, Tatjana, ŠUŠTAR VOZLIČ, Jelka, KALIGARIČ, Mitja. (2012) Population genetics of the narrow endemic *Hladnikia pastinacifolia* Rchb. (Apiaceae) indicates survival in situ during the Pleistocene. *Acta Biologica Cracoviensia. Series Botanica*, 54, 1, 84-96
- ŠAJNA, Nina, KUŠAR, Primož, SLANA NOVAK, Ljuba, NOVAK, Tone. (2011) Benefits of low-intensive grazing: co-occurrence of umbelliferous plant (*Hladnikia pastinacifolia* Rchb.) and opilionid species (*Phalangium opilio*. L) in dry, calcareous grassland. *Polish journal of ecology*, vol. 59, issue 4, str. 777-786
- ŠKORNIK, Sonja, ŠAJNA, Nina, KRAMBERGER, Branko, KALIGARIČ, Simona, KALIGARIČ, Mitja. (2008) Last remnants of riparian wooded meadows along the middle Drava River (Slovenia) : species composition is a response to light conditions and management. *Folia geobotanica*, vol. 43, no. 4, str. 431-445.
- KALIGARIČ, Mitja, SEDONJA, Jožef, ŠAJNA, Nina. (2008) Traditional agricultural landscape in Goričko Landscape Park (Slovenia) : distribution and variety of riparian stream corridors and patches. *Landscape and urban planning*, vol. 85, iss. 1, str. 71-78,

Dr. Boris Kryštufek

- AL SAYEGH-PETKOVŠEK, Samar, KOPUŠAR, Nataša, KRYŠTUFEK, Boris. (2014) Small mammals as biomonitors of metal pollution : a case study in Slovenia. *Environmental monitoring and assessment*, 2014, vol. 186, iss. 7, str. 4261-4274.
- VARLJEN BUŽAN, Elena, BRYJA, Josef, ZEMANOVA, Barbora, KRYŠTUFEK, Boris. (2013) Population genetics of chamois in the contact zone between the Alps and the Dinaric Mountains : uncovering the role of habitat fragmentation and past management. *Conservation Genetics*, 14, issue 2, str. 401-412
- KRYŠTUFEK, Boris, IVANITSKAYA, Elena, ARSLAN, Atila, ARSLAN, Emine, VARLJEN BUŽAN, Elena. (2012) Evolutionary history of mole rats (genus *Nannospalax*) inferred from mitochondrial cytochrome b sequence. *Biological journal of the Linnean Society* 105, 446-455.
- MOUTON, Alice, GRILL, Andrea, SARA, Maurizio, KRYŠTUFEK, Boris, RANDI, Ettore, AMORI, Giovanni, JUŠKAITIS, Rimvydas, ALOISE, Gaetano, MORTELLITI, Alessio, PANCHETTI, Fabiana, MICHAUX, Johan. (2012) Evidence of a complex phylogeographic structure in the common dormouse, *Muscardinus avellanarius* (Rodentia, Gliridae). *Biological journal of the Linnean Society*, 105, 648-664,
- VARLJEN BUŽAN, Elena, FÖRSTER, Daniel W., SEARLE, Jeremy B., KRYŠTUFEK, Boris. (2010) A new cytochrome b phylogroup of the common vole (*Microtus arvalis*) endemic to the Balkans and its implications for the evolutionary history of the species. *Biological journal of the Linnean Society*, 100, iss. 4, str. 788-796.
- VARLJEN BUŽAN, Elena, KRYŠTUFEK, Boris, BRYJA, Josef. (2010) Microsatellite markers confirm extensive population fragmentation of the endangered Balkan palaeoendemic Martino's vole (*Dinaromys bogdanovi*). *Conservation Genetics*, 11, str. 1783-1794.
- KRYŠTUFEK, Boris, VOHRALÍK, Vladimír, OBUCH, Ján. (2009) Endemism, vulnerability and conservation issues for small terrestrial mammals from the Balkans and Anatolia. V: KRYŠTUFEK, Boris (ur.), et al. *Mammal conservation in Europe : status and priorities : collection of papers from 5th European Mammal Congress, Siena, Italy, September 21-26, 2007*, *Folia zoologica* 58, 291-302.