



Univerza v Mariboru
University of Maribor

Fakulteta za naravoslovje in
matematiko
Faculty of Natural Sciences and
Mathematics



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet:	Biogeografija
Subject Title:	Biogeography

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Izobraževalna biologija, pedagoški dvopredmetni študij 2. stopnje	/	2	zimski/poletni
Educational Biology, pedagogical two stream study, 2 nd. degree	/	2	Winter/Summer

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30				15	45	3

Nosilec predmeta / Lecturer:

Jeziki / Languages: Predavanja / Lecture:
Vaje / Tutorial:

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

Vsebina:

- Definicije in zgodovina biogeografije.
- Fizično okolje
- Distribucija osebkov, populacij in vrst na Zemlji
- Biomi, ekosistemi, združbe: vzorci razširjenosti, biogeografske regionalizacije
- Disperzije in migracije vrst
- Speciacija in izumrtje
- Osnove filogeografije
- Paleobiogeografija, vključno s pleistocensko dinamiko
- Endemizem, vikarianca
- Otoška biogeografija
- Ekografija: velikost, oblika in abundanca arealov in populacij.

Contents (Syllabus outline):

- Definitions and history of biogeography.
- Physical environment .
- Distribution of individuals, populations and species on Earth.
- Biomes, ecosystems, communities: patterns of distribution.
- Dispersion and migration of species.
- Speciation and extinction.
- Principles of phylogeography.
- Paleobiogeography, Pleistocene dynamics including.
- Endemism, vicariance.
- Island biogeography.
- Ecography: size, shape, abundance of ranges and populations.

- Varstvena biogeografija
- Študentje poznajo terminologijo fitogeografije in zoogeografije; na osnovi poznavanja historičnega razvoja rastlinstva se seznanijo z biogeografsko regionalizacijo

- Conservational biogeography.
- Students know phytogeographic and zoogeographic terminology; they learn biogeographical regionalisation on the basis of knowledge of vegetation evolution.

Temeljni študijski viri / Textbooks:

- Breckle, S.-W., 2002: Walter's Vegetation of the Earth. Springer Verlag.
- Cox, C.B., P.D. Moore, 2005: Biogeography. An Ecological and Evolutionary approach. Blackwell Publishing. Malden, USA.
- Grabherr, G., 1997: Farbatlas Oekosysteme der Erde. Ulmer Verlag.
- Hubbel, S. P., 2001: The unified Neutral Theory of Biodiversity and Biogeography. Princeton University Press, New Jersey, USA.
- Lomolino, M. V., 2006: Biogeography. Third Edition. Sinauer Associates, Inc., Sunderland, USA.
- Lovrenčak, F., 2003: Biogeografija. Študijsko gradivo za geografe. Filozofska fakulteta, Ljubljana.
- MacArthur, R. H., E. O. Wilson, 2001: Island Biogeography. Princeton University Press, New Jersey, USA.
- Rosenzweig, M. I., 1995: Species Diversity in Space and Time. Cambridge University Press, UK.
- Whittaker, R. J., 1999: Island Biogeography. Oxford University Press, UK.

Cilji:

- Seznanijo se s fizičnim okoljem in zakonitostmi razširjenosti osebkov, populacij in vrst na Zemlji
- Spoznajo biome, ekosisteme, združbe ter njihove vzorce razširjenosti
- Poznajo pojave disperzije in migracije ter speciacija in izumiranja
- Spoznajo osnove filogeografije in paleobiogeografije
- Na primerih spoznajo endemizem in vikarianco
- Spoznajo teorijo otoške biogeografije in osnove ekografije
- Uvedejo se v varstveno biogeografijo
- Poznajo razprostranjenost rastlinstva in živalstva na Zemlji, s posebnim poudarkom na območju Slovenije
- Poznajo regionalizacijske kriterije biocon

Objectives:

- Students learn the physical environment and principles of distribution of individuals, populations and species.
- Students are introduced to biomes, ecosystems, communities and get insights into their patterns of distribution.
- Students learn phenomena of dispersion, migration, speciation, and extinction.
- Students get insights about principles of phylogeography and paleobiogeography.
- On case studies they are introduced to endemism and vicariance.
- Students learn island biogeography and principles of ecography.
- Students are introduced to conservational biogeography.
- They get knowledge of plant and animal distribution in the Earth, with an emphasis on the territory of Slovenia.
- They know the criteria of biozones regionalisation.

Predvideni študijski rezultati:

Intended learning outcomes:

<ul style="list-style-type: none"> • Študenti so sposobni najti zveze med značilnostmi fizičnega okolja ter evolucijskimi in ekološkimi vzorci razširjenosti organizmov na Zemlji • Študenti so sposobni izsledke filogeografije, paleobiogeografije in ekografije aplicirati v naravovarstvu • Študenti spoznavajo biosfero in njene sestavine v Sloveniji • Razumejo razprostranjenost lokalnih in regionalnih biocon na Zemlji <p>Prenesljive/ključne spretnosti in drugi atributi:</p> <ul style="list-style-type: none"> • Terensko opazovanje in postavljanje hipotez • Razumevanje biogeografskih vzorcev in procesov v naravnem okolju
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<p>Knowledge and Understanding:</p> <ul style="list-style-type: none"> • Students are capable to find relations between environmental characteristics, and evolutionary and ecological based principles of distribution of organisms on the Earth. • Students are capable to apply the outputs of phylogeography, paleobiogeography and ecography in conservational issues. • They provide knowledge of the biosphere and its compartments in Slovenia. • They understand the dispersion of local and regional biozones on the Earth. <p>Transferable/Key Skills and other attributes:</p> <ul style="list-style-type: none"> • Field observations and making hypotheses • Understanding of biogeographical patterns and processes in natural environment

Metode poučevanja in učenja:

Learning and teaching methods:

<ul style="list-style-type: none"> • Predavanja • Seminar • Individualno delo
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<ul style="list-style-type: none"> • Lectures • Seminar • Individual work
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Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

<ul style="list-style-type: none"> • Ustni izpit • Pisni izpit 	<p>50</p> <p>50</p>	<ul style="list-style-type: none"> • Oral exam • Written exam
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Materialni pogoji za izvedbo predmeta :

Material conditions for subject realization

<ul style="list-style-type: none"> • <i>Multimedijaska predavalnica</i>
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<ul style="list-style-type: none"> • <i>Lecture hall for multimedia presentations</i>
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Obveznosti študentov:

Students' commitments:

<p><i>(pisni, ustni izpit, naloge, projekti)</i></p> <ul style="list-style-type: none"> • Izpit – ustni in pisni • Seminaraska vaja 	<p><i>(written, oral examination, coursework, projects):</i></p> <ul style="list-style-type: none"> • Oral and written examination • Seminar exercise
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