Study program: Biology

Course name: Biogeography

Teachers: Goran Anačkov, Olivera Bjelić Čabrilo

Status: Mandatory

ECTS: 5

Prerequirements: none

Course goals: Understanding of essential terms, processes and methods of biogeography, as well as patterns of distribution of plant and animal species and communities in terrestrial and aquatic habitats, specific phyto- and zoogeographical divisions and Serbia in particular.

Course outcome: Obtaining essential biogeographical knowledge. The student is capable of applying terms and principles relating to range and chorology of plant and animal species and communities on Earth. Upon course completion, the student will understand the basic patterns of horizontal and vertical distribution of organisms and learn to recognize and identify biogeographic categories. Additionally, they will be able to correctly apply methods used in biogeographical research.

Course content:

Theoretical

The concept of range, its formation and characteristics (mapping, typology, size, form, dynamics, patterns of distribution), centres of distribution and species origin. Barriers (physical, ecological, spatial and temporal, biological, active and passive dispersal). Endemism, cosmopolitism, relic species, vicariance, island and alpine biogeography. Chorology, basic methods of biogeographical research. Essentials of historic biogeography, continental drift, Tertiary flora and fauna, the Ice Age and its significance in forming contemporary floral and faunal distribution. Phytogeographical division of Earth, floristic kingdoms. Zoogeographical divisions of land: Nothogea, Neogea, Arctogea. Phytogeography of Serbia and the Balkan Peninsula, floral elements in Serbia, vertical chorological stratification in the Balkan Peninsula. Fauna (definition, structure, analysis, genesis). Fauna of Serbia with representative tetrapod species.

Practical

Basic methods of mapping, direct and indirect mapping in floristics. Floral elements. Floristic statistics (range type spectrum, taxonomic and biological spectrum, generic coefficient, index of florogenesis, estimates of floristic richness and diversity, floral similarity indices). Endemic and relic species. Vertical stratification exemplified by alpine areas of the Balkan peninsula. Representative vertebrate species of selected zoogeographical regions, aided by audio-visual material.

Literature:

Janković M. 1985. Fitogeografija. Faculty of Sciences, University of Belgrade.

Janković M, Atanacković BS. 1999. Biogeografija sa pedologijom. Faculty of geography, University of Belgrade.

Lopatin I. 1995. Zoogeografija (translated from Russian). Zim-Prom, Kragujevac.

Lopatin I, Matvejev S. 1995. Kratka zoogeografija sa osnovama biogeografije i ekologije bioma Balkanskog poluostrva. Book 1. Ljubljana, Slovenia.

Cox BC, Moore PD, Ladle RJ. 2016. Biogeography, an Ecological and Evolutionary Approach, ninth ed. Wiley Blackwell, Oxford, Chichester, Hoboken.

Number of classes of active student involvement:

Lectures: 3	Practical: 2	Other forms of study: 0	Research papers: 0	Other classes:

Course methods: Lectures and interactive classes with audio-visual presentations. Studying through problem solving in biogeographical analyses. Demonstrative teaching with use of adequate collections of material.*

Grading

Pre-exam requirements	points	**Final exam**	points
Attendance – lectures	5	Written exam	45
Attendance – practical		Oral exam	20
Pop quiz	15		
Semestral test	15		

* The course is a foundation for Field course 3, during which students visit the biogeographical and ecological units covered by the course curriculum.