

Study Programme : MSc. in Ecology			
Degree level: Master degree			
Course Title: SPECIAL BIOGEOGRAPHY			
Professor: Ante Vujić, PhD, Goran Anačkov, PhD			
Required/Elective Course: Elective			
Number of ECTS: 8			
Prerequisites: -			
Course Objective: The aim is to introduce students to specific patterns of wildlife distribution on Earth. Course also provides answers to the question why organisms occupy specific areas, why there is a certain distribution types (historical reasons, continental drift, glaciation, modern climate change, island biogeography). Students will become especially familiar with the connections between biogeography and conservation and with the basics of applied biogeography associated with individual species and their conservation.			
Course Outcome: Throughout this course students will learn about specific biogeographical laws that may contribute to the conservation of species and ecosystems. With practical activities, related to this issue, students will be further trained for involvement in projects relating to the protection of species and ecosystems.			
Course Content: <i>Theoretical part</i> Biogeographical dynamics: Geological changes and Earth tectonics, continental drift, glaciation. Basics of endemism, relicts and vicarism. Dispensing and displacement, barriers (physical, environmental, space-time, biological): active dispensing and displacement, passive dispensing and displacement. Flora: the concept, structure, age, genesis, island flora. Fauna: the concept, structure, age, analysis, genesis, island fauna. Theoretical basis of phytogeographical division of water and land ecosystems on earth. Theoretical basis of zoogeographical division of water and land ecosystems of the planet. Island biogeography: species richness, the theory of equilibrium, continental and marine habitats. Biogeography and conservation. <i>Practical part</i> Statistical models in biogeographical research: PCA, multidimensional scaling, species analysis, agglomerative clusters. Introduction of species, invasive species. Threatened centers of diversity - hotspot areas: overview of the major centers of diversity that are under extreme anthropogenic influence. Biogeographical area of the Balkan Peninsula. Applied biogeography: protection of species and ecosystems.			
Reading List: Brown, H.J. & Lomolino, M.V. (1998): Biogeography: Second edition. Sinauer Associates, Inc. Sunderland, Massachusetts. Clarke, K.R., Warwick, R.M. (1994): Change in Marine Communities, an approach to Statistical Analysis and Interpretation. Natural Environment Research Council UK, Plymouth Marine Laboratory, Plymouth. Hubbell, S. (2001): The Unified Neutral Theory of Biodiversity and Biogeography. Princeton University Press, Princeton and Oxford.			
Total hours:			
Lectures: 2	Practicals: 2	Other:	Student research work:5
Methods of instruction: Video presentation, seminar preparation and defense. *Field training: tour around the major biogeographical units in Serbia			
Assessment (maximum number of points 100)			
Requirements	points	Final exam	points
Active participation in lectures	10	Practical exam	50
Active participation in practicals	20	Oral exam	
Test(s) or			
Pre-exam testing	20		
Remark:			