

Course Unit Descriptor

Study Programme: Bachelor of Science in Biology, Bachelor of Science in Ecology			
Course Unit Title: The Ecology of Adaptive Radiation			
Course Unit Code: OBE018			
Name of Lecturer(s): Dr Vesna Milankov			
Type and Level of Studies: Bachelor Academic Degree			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: None			
Course Aims: <p>Since much of life's diversity has arisen during adaptive radiations, the course examines the evolution of diversity within a rapidly multiplying lineage. The course focuses on the 'ecological' theory of adaptive radiation; the relationships between divergent natural selection, which arise from differences in environment and competition between species, and phenotypic divergence and speciation in adaptive radiation.</p>			
Learning Outcomes: <p>In the light of all the recent evidence, the course provides the students with the appropriate principles and tools to understand the causes of adaptive radiation. Emphasis is also placed on developing oral and written communication skills. Reading scientific papers students acquire advanced and broader knowledge of evolution of adaptive radiation. During work on projects and debates students improve communication skills as well.</p>			
Syllabus: <p><i>Theory</i> The origins of ecological diversity; Detecting adaptive radiation; The progress of adaptive radiation; The ecological theory of adaptive radiation; Divergent natural selection between environments; Divergence and species interactions; Ecological opportunity speciation; The ecological basis of speciation; Divergence along genetic lines of least resistance.</p> <p><i>Practice</i> Using relevant scientific papers students will examine some famous examples of adaptive radiation: the East African cichlid fishes, the Hawaiian silverswords, Darwin's Galápagos finches, <i>Anolis</i> - a genus of iguanian lizards belonging to the family Dactyloidae, <i>Schiedea</i> - a genus of flowering plants in the pink family, Caryophyllaceae.</p>			
Required Reading: 1. Dolph Schluter (2000) The ecology of adaptive radiation. Oxford University Press. Oxford. 2. Milankov, V. (2007) Biološka evolucija. PMF, Novi Sad			
Weekly Contact Hours:	Lectures: 1	Practical work: 1 + 2	
Teaching Methods: Video beam and overhead presentation			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class		written exam	

participation			
Practical work		oral exam	70
Preliminary exam(s)		
Seminar(s)	30		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			