Study Programme : BSc in Ecology and BSc in Biology

Degree level: Bachelor degree

Course Title: The Ecology of Adaptive Radiation

Professor: Vesna Milankov, PhD

Elective Course

Number of ECTS: 6

Prerequisites:

Course Objective:

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 on the 'ecological' theory of adaptive radiation; the relatinships between divergent natural selection, which arise from differences in environment and competition between species, and phenotypic divergence and speciation in adaptive radiation.

Course Outcome:

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.

Course Content:

Theoretical part

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

Practical part

Using relevant scientific papres students will examine some famious examples of adaptive radiation: the East African cichlid fishes, the Hawaiian silverswords, Darwin's Galápagos finches, Anolis - a genus of iguanian lizards belonging to the family Dactyloidae, *Schiedea* - a genus of flowering plants in the pink family, Caryophyllaceae.

Reading List:

1. Dolph Schluter (2000) The ecology of adaptive radiaiton. Oxford University Press. Oxford.
2. Миланков, В. (2007) Биолошка еволуција. ПМФ, Нови Сад.

Total hours:

Lectures: 1	Practicals: 1	Other:	Student research work:	Other: 2

Methods of instruction:

Video beam and overhead presentation

Assessment **(maximum number of points 100)**

Requirements	**points**	**Final exam**	**points**
Active participation in lectures		Practical exam	35
Active participation in practicals		Oral exam	35
Test(s) or			
Pre-exam testing		30	

Remark: