Study Programme: BSc in Ecology

Degree level: Bachelor degree

Course Title: Mechanisms of ecological adaptation

Professor: dr Radmila Kovačević, dr Nataša Nikolić, dr Danijela Kojić

Required Course

Number of ECTS: 7

Prerequisites: -

Course Objective:
This course focuses on the understanding of basic principles of ecological, physiological and biochemical adaptations of different organisms.

Course Outcome:
Aim of the course is to promote students to actively use their knowledge from biochemistry, physiology of animals and plants and apply it in the field of ecology and nature protection.

Course Content:
Theoretical part
Lectures are organised into following sections:
Behavioral, anatomical/structural as well as molecular adaptations of plants and animals on various ecological factors - drought, anoxia, hypersalinity, high/low temperatures etc.

Practical part
Plants. Structural adaptations of roots, stems and leaves. Physiological-biochemical changes during illness, parasite infection, UV and various temperatures exposure and drought.
Animals. Adaptations in respiration, termoregulation and detoxication as well as on low temperatures, dehydration and oxidative stress.

Reading List:
Stevanović, B., Janković, M. (2001): Ekologija biljaka. NNK Internacional
Dickison C. W. (2000): Integrative plant anatomy, Harcourt academic press, New York, London
Dawson J., Lucas, R. (2005): The Nature of Plants -Habitats, Challenges, and Adaptations, Timber Press.
Hochachka, W.P., Somero, G.N. (2002): Biochemical Adaptation, Oxford University Press
Wilmer, P., Stone, G., Johaston, I. (2000): Envirmental Physiology of Animals, Blackwell Science Ltd.
Kastori, Fiziologija biljaka (2006), Verzal, Novi Sad
Gajton, A.C., Medicinska fiziologija (2003), Medicinska naklada, Zagreb.

Total hours:				
Lectures: 3	Practicals: 3	Other:	Student research work:	

Methods of instruction:
Theoretical part – lectures, practical part – laboratory experiments and student seminars.

Assessment (maximum number of points 100)

Requirements	**points**	**Final exam**	**points**
Active participation in lectures		Practical exam	20
Active participation in practicals		Oral exam	80-0
Test(s) or	0-80		
Pre-exam testing			
Seminar	20		

Remark: