

(Table 5.2) Course unit description

Study program : ECOLOGY			
Type and level of studies: Master academy study – II level of studies			
Course unit: Conservation ecology			
Teacher in charge : Vladica M. Simić, Ph.D.			
Language of instruction: English			
ECTS: 6			
Prerequisites: /			
Semester : Winter semester			
Course unit objective The aim of the course is to teach students the knowledge and skills that will enable them to be actively engaged in the conservation of ecosystems and organisms.			
Learning outcomes of Course unit The students will master skills and techniques of biodiversity field research, skills of monitoring the populations of endangered species, and conservation skills. They will primarily adopt an attitude towards the need for constant monitoring of the populations of species and ecosystems in order to take measures for protection and conservation in time.			
Course unit contents <i>Theoretical classes</i> Basic characteristics of biodiversity. Main factors and specificities for the endangering of the “Hippo” biodiversity. Hot spots – the centres of biodiversity. The development of biological and ecological conservation. The problem of species and conservation. Principles and methods of conservation of biodiversity on local, regional and international levels. IUCN categorization, the red book. Evaluation of parameters that are required for assessing the status of the emergency; value of the estimation: coping with uncertainty. The biological consequences of the fragmentation of ecosystems. Geographical isolation. Population analysis - population fragmentation. The concept of metapopulation; Levin's model; genetics and demography of small populations. Inbreeding depression. Global change and mass extinctions. The strategy of setting protection priorities and defining evolutionary protection units. Genetic management of wild populations and the problem of small populations. Introduction of populations and breeding in captivity (ex situ). Cryopreservation, ecosystem diversity, conservation of habitats and landscapes. The selection and management of protected areas - management of ecosystems. Restorative ecology. Conservation, economy and sustainable development. Biodiversity and conservation of the Serbian ecosystem. <i>Practical classes</i> Methodology for monitoring populations. IUCN criteria and application. Methodology of conservation of species in natural (in situ) and artificial conditions (ex situ). Examples of conserving certain groups of organisms, populations and different types of ecosystems and habitats (terrestrial and aquatic). Examples of ecosystem management. Application of modeling ecosystems in the conservation process. Examples of different types of ecosystem restoration. Field work: Visit and work analysis. National Park. Zoo. Aquarium.			
Literature Soule, E. M., Wilcox, A. B. (1983). Conservation biology. Publ. Sunderland, Massachusetts. Andrew S. Pullin (2002). Conservation biology. Cambridge University Press. Sven E. Jørgensen, Robert Costanza, Fu-Liu Xu (2005). Ecological Indicators for Assessment of Ecosystem Health. Taylof and Francis Group. Anthony R. E. Sinclair, John M. Fryxell, Graeme Caughley (2006). Wildlife Ecology, Conservation and Management. Blackwell publishing company.			
Number of active teaching hours			Other classes
Lectures:	Practice:	Other forms of classes: Mentoring (consultative) system	
Independent work:			
Teaching methods Lectures, power-point presentations, Internet use, seminars, field and laboratory practice			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures		oral examination	40
practical classes/tests		written examination	30

Seminars/homework	30	
Other	-		
Grading system			
Grade	No. of points	Description	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	< 51	Failing	