

<b>Study Programme: PhD in Biology</b>			
Degree level: Doctoral degree			
<b>Course Title: Conservation Biology</b>			
<b>Professor: dr Vesna Milankov, dr Ljubinka Francuski Marčetić</b>			
<b>Elective Course</b>			
<b>Number of ECTS: 15</b>			
<b>Prerequisites: Introduction to Conservation Biology</b>			
<b>Course Objective:</b> Conservation biology deals with genetic management of small populations, resolution of taxonomic uncertainties, defining management units within species and the use of molecular genetic analyses in forensic and understanding species' biology.			
<b>Course Outcome:</b> Students gain critical thinking skills for analyzing data.			
<b>Course Content:</b> <i>Theoretical part</i> Biological diversity: genetic-, intraspecies-, ecosystems-; Species concepts and conservation; Endangered and extinct species: causes: habitat and population fragmentation, overexploitation; introduced species; Conservation genetics: population genetic structure in heterogeneous environment, inbreeding and inbreeding depression, relationship between genetic diversity and reproductive fitness; genetically viable population; Metapopulation; Gene flow; Phylogeography in conservation biology; Outbreeding depression; Resolving taxonomic uncertainties and defining management units; Hybridization and introgression; Variation over space and time; Island theme; Loss of genetic diversity in small populations. <i>Practical part</i> Measuring genetic diversity in natural populations and colonies using different molecular markers of nuclear and mitochondrial genomes; Measuring of quantitative traits; Using integrative approach in defining evolutionarily significant units and management units; Statistics in conservation genetics.			
<b>Reading List:</b> 1. Avise, J.C., Hamrick, J.L. 1997. Conservation genetics: Case histories from nature. Kluwer Academic. 2. Ferriere, R., Dieckmann, U., Couvet, D. 2004. Evolutionary conservation biology. Cambridge University Press. 3. Frankham, R., Ballou, J.D., Briscoe, D.A., McInnes, K.H. 2004. A primer of conservation genetics. Cambridge University Press. 4. Primack, RB. 2006. Essentials of conservation biology. 4 <sup>th</sup> ed. Sinauer Ass. SU.			
<b>Total hours:</b>			
Lectures: 5	Practicals:	Other:	Student research work: 5
<b>Methods of instruction:</b> video beam, oral presentation, study of scientific papers			
Assessment (maximum number of points 100)			
<b>Requirements</b> Seminar 50, oral exam 50			
<b>Remark:</b>			