

Course Unit Descriptor

Study Programme: PhD in Biological Sciences		
Course Unit Title: Conservation Biology		
Course Unit Code: DNB023		
Name of Lecturer(s): Dr Vesna Milankov, Dr Ljubinka Francuski Marčetić		
Type and Level of Studies: PhD Degree		
Course Status (compulsory/elective): Elective		
Semester (winter/summer): Winter		
Language of instruction: English		
Mode of course unit delivery (face-to-face/distance learning): face-to-face		
Number of ECTS Allocated: 15		
Prerequisites: Introduction to Conservation Biology		
<p>Course Aims: 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.</p>		
<p>Learning Outcomes: Students gain critical thinking skills for analyzing data.</p>		
<p>Syllabus:</p> <p><i>Theory</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.</p> <p><i>Practice</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.</p>		
<p>Required Reading:</p> <ol style="list-style-type: none"> 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. 4th ed. Sinauer Ass. SU. 		
Weekly Contact Hours:	Lectures: 5	Practical work: 0 + 5
<p>Teaching Methods: video beam, oral presentation, study of scientific papers</p>		
Knowledge Assessment (maximum of 100 points):		

Pre-exam obligations	points	Final exam	points
Active class participation		written exam	
Practical work		oral exam	50
Preliminary exam(s)		
Seminar(s)	50		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.