

Study Programme: Bachelor of Science in Ecology (2018/2019-)
Course Unit Title: Basics of Conservation Biology I
Course Unit Code: OE026
Name of Lecturer(s): Dr Vesna Milankov
Type and Level of Studies: Bachelor Academic Degree
Course Status (compulsory/elective): Compulsory
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: 3
Prerequisites: None
<p>Course Aims:</p> <p>Conservation Biology course involves theory of population genetics and ecology, taxonomy, systematics and evolutionary biology and their implementation in defining conservation units, priorities and management. Since biological diversity involved three main parts (genetic, species and ecosystem diversity) the course examines the evolution of biodiversity and human impacts on it. The genetic basis of conservation biology includes genetic variation within and among populations, loss of genetic variation (bottleneck effect, genetic drift, hybridization and inbreeding). The topics of the lectures deal with habitat loss, the causes and patterns of extinctions, fragmentation, problems faced by small populations of threatened species and species extinction.</p>
<p>Learning Outcomes:</p> <p>The course provides the students with the appropriate principles and tools to tackle the many problems associated with the preservation and conservation biodiversity. Emphasis is also placed on developing oral and written communication skills. Students obtain the principles of conservation management, selection and prioritization criteria for protected areas and sustainable development. Students acquire fundamental knowledge to evaluate areas for conservation and be able to prepare written report and oral presentation. Reading scientific papers students acquire advanced and broader knowledge of conservation biology. During work on group project and debates students improve communication skills as well.</p>
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Introduction: „The sixth extinction“; Endangered and extinct species; Methodology in conservation biology. Genetics and extinction: Relationships between loss of genetic diversity and extinction. Evolutionary genetics of natural populations: genetic diversity; evolutionary potential of the species; variation over space and time. Characterizing genetic diversity: single loci and quantitative variation. Evolution in large populations: natural selection and adaptation; mutation, migration and their interactions with selection. Evolution in small populations: importance of small populations in conservation biology. Maintenance of genetic diversity: conservation of genetic diversity.</p> <p><i>Practice</i></p> <p>Use of molecular markers in delineation of sympatric and allopatric species. Evolutionarily conservation units. Population fragmentation. Measuring population fragmentation: F statistics. Genetics and the management of wild populations. Genetic management of captive populations. Genetic management for reintroduction.</p>
Required Reading:

1. Milankov, V. (2007) Osnovi konzervacione biologije I. Prirodno-matematički fakultet, Novi Sad

Weekly Contact Hours:

Lectures: 1

Practical work: 1 + 2

Teaching Methods:

Video beam and overhead presentation

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation		written exam	20
Practical work		oral exam	50
Preliminary exam(s)		
Seminar(s)	30		

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