Name of the subject: CONSERVATION BIOLOGY

Teacher(s): Dr. Vesna Milankov

Status of the subject: Elective

Number of ECTS points: 15

Condition: -

Goal

The interdisciplinary course Conservation Biology aims at broadening students' knowledge about the biological diversity crisis and maintaining the diversity from the aspect of evolutionary conservation biology.

Outcome of the subject

Acquiring the knowledge and skills in studying spatial structure and dynamics of fragmented populations and evolutionary consequences of the loss of genetic diversity and habitat reduction.

Content of the subject

Introduction to Evolutionary Conservation Biology: environmental changes and evolutionary responses; Theory of extinction; Response to environmental changes: adaptation or extinction; Genetic variability and life history evolution; Environmental stress and quantitative genetic variability; Evolutionary Genetics in small populations: adaptive evolution and origin of diversity: conservation and speciation; Evolutionary deterioration, collapse and suicide; Evolutionarily significant units, management units and determination of genetically divergent population fragments; Metapopulation genetics: selection and drift in metapopulations, metapopulation and Coalescent theory; Evolutionary dynamics in metapopulations; Evolution in heterogeneous environments; Genetic rescue of endangered populations; Inbreeding depression and outbreeding depression; Forensic identification of species and wildlife products.

Recommended literature

1. Ferriere, R., Dickmann, U., Couvet, D. 2004. Evolutionary conservation biology. Cambridge University Press.
2. Hanski, I., Gaggiotti, O.E. 2004. Ecology, Genetics, and Evolution of Metapopulations. Elsevier Academic Press.
3. Frankham, R. et al. 2017. Genetic management of fragmented animal and plant populations. Oxford University Press.

Number of active classes	Theory: 5	Practice: 5

Methods of delivering lectures

Oral, seminar paper writing, analyzing papers published in relevant journals

Evaluation of knowledge (maximum number of points 100)

Oral exam 40, Seminar paper 60