

Study Program: Biology			
Type and level of studies: Bachelor studies			
Course name: Theory of organic evolution			
Lecturer: Kiković D. Dragan			
Status: Compulsory			
ECTS: 5			
Attendance Prerequisites: Genetics			
Course aims The students should become acquainted with the basic methods and mechanisms of evolutionary change. The subject of study is the adaptive significance of genetic variability of populations and the mechanisms responsible for the emergence and preservation of both molecular and phenotypic diversity.			
Course outcome The students have gained basic knowledge about the factors for the emergence and preservation of biological diversity. The knowledge acquired is the basis for further education in phylogeography, anthropogenesis, life history and conservation biology. Additionally, it can be applied in practice in agriculture, veterinary medicine, medicine, industry, etc...			
Course content Darwinism and evolutionary facts; Methods of evolutionary analysis; Mechanisms of evolutionary change: Mutations: new genes and alleles, Genetic drift, Gene flow, Natural selection: levels of action; action of selection on quantitative characteristics, Wright's shifting balance theory; Adaptations: Mechanisms of adaptation to the physical environment, Mechanisms of adaptations to the biological environment; Species: Species identification, Species conception, Population structure of species, Geographical variability, Speciation, Genetic theories of speciation, Mechanisms of reproductive isolation; The history of life: The origin of life, Cambrian explosion, Macroevolutionary novelties, Transitional forms; Basics of conservation biology: Mass extinctions; Basic principles of conservation biology.			
Literature 1. Миланков, В. (2007) Биолошка еволуција. ПМФ, Нови Сад. 2. Туцић, Н. (2003) Еволуциона биологија. II допуњено и промењено издање. ННК Интернационал, Београд. 3. Туцић, Н. (1999) Еволуција, човек и друштво. Досије и Академска алтернативна мрежа, Београд.			
Number of active classes			Other classes:
Lectures: 3	Practical classes: 0	Other forms of teaching: 0	
Teaching methods Lectures, laboratory exercises.			
Assessment (maximum 100 points)			
Course assignments	points	Final exam	points
activity during lectures	10	written exam	
practical classes	10	oral exam	60
Term test/s	20		
Total	40		60