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| Study Program: Biology | | | | |
| Type and level of studies: Bachelor studies | | | | |
| Course name: Genetics | | | | |
| Lecturer: Savić Lj. Gojko | | | | |
| Status: Compulsory | | | | |
| ECTS: 6 | | | | |
| Attendance Prerequisites: The students are expected to have certain knowledge about hereditary processes and the associated notions. | | | | |
| Course aims Helping students to comprehend the biological heredity and variability and gain interest in this very complex biological science. | | | | |
| Course outcome The students are able to follow more demanding courses, as well as to successfully transfer their knowledge to others or apply it in practical agriculture, veterinary medicine, medicine and technology practice. | | | | |
| Course content <i>Theoretical part:</i> Basic principles of genetics. Types of gene interactions. Effects of the environment on heredity and variation. Cytogenetics. Human chromosomes. Changes in the number and structure of chromosomes. Hereditary changes caused by chemical and physical factors. Genetic control of sexual differentiation. Extrachromosomal inheritance. Causes of chromosomal changes. Biochemical genetics (DNA structure, RNA structure and types, replication, transcription, translation, structural analysis and function of genes, immunogenetics, theory of antibody formation, genetic basis of transplantation. Genetic predisposition of cancer. Genetic control of aging. Population genetics (population balance, heritability, heterosis, types of artificial selection, adaptive value, genetic load, inbreeding). Behavioural genetics. Mental retardation and mental illness. Trait variations among individuals. <i>Practical Part:Exercises</i> Practical classes are in accordance with the content of lectures. | | | | |
| Literature Маринковић Д.,Туцић Н.,Кекић В. (1981): Генетика, Научна књига, Београд; Владимир Спасојевић,(1978): Цитогенетика,Научна књига , Београд; Катарина Боројевић,(1991): Гени и популација,ПМФ,Нови Сад; Петар Д. Мишић (1999): Генетика, Панчево; Никола Туцић и Гордана Матић(2002): О генима и људима, Београд; Небојша Р. Делетић(2009): Увод у молекуларну генетику, Пољопривредни факултет.Зубин Поток; Софија Павковић-Лучић(2006): Приручник из основног курса генетике са тест питањима и задацима, Београд(2006). | | | | |
| Number of active classes | | | | Other classes |
| Lectures: 3 | Practical classes: 2 | Other forms of teaching: | Students' research work | |
| Teaching methods Theoretical classes, practical classes, term tests. | | | | |
| Assessment (maximum 100 points) | | | | |
| Course assignments | points | Final exam | | points |
| activity during lectures | 10 | written exam | | 10 |
| practical classes | 10 | oral exam | | 50 |
| Term test/s | 20 | | | |
| Total | 40 | | | 60 |