Study program: MSc Biology

Study level: Master's studies

Course title: Human genome

Course code: MB35

Teacher: Assoc. Prof. Dr. Mihajla Đan

Course status: elective

ECTS: 7

Requirements:

Course objectives:
The aim of this course is to introduce students to the human genome organization, distribution and function of Genes.

Learning outcomes
After successful fulfilling of pre-exam and exam obligations student can: differ levels of structural and functional human genome organization and understand the mechanisms of gene regulation and expression.

Syllabus

Theoretical instruction

General organization of the human genome. Protein-coding genes. RNA genes. Highly repetitive DNA. Human mitochondrial genome. Human gene expression. Studying gene function. Human genetic variability and its consequences. Genetic mapping of Mendelian characters. Identifying human disease genes and susceptibility factors. Cancer genetics. Gene therapy.

Teaching laboratory

Molecular markers: the selection of marker systems in diagnostics, population genetics and forensics. Use of internet sources with information on the human genome organization and function: NCBI, OMIM, GENOME.

Literature

Stachan T, Read AP. Human Molecular Genetics 4 Garland Publishing, UK, 2011.
Диклић В. Косановић, М., Дукић С., Николић Ј., Биологија са хуманом генетиком, Графопан, Београд, 2001.

Weekly teaching load	Lectures: 3	Teaching laboratory**:** 2	Other forms of teaching: 4

Teaching methods
lectures, practical lectures, laboratory work, seminar, tuition

Evaluation of knowledge (maximum score 100)

Pre-exam obligation	points	**Final exam**	points
Student engagement in lectures		Written exam	
Seminar	Up to 20	Oral exam	Up to 70
Tests			
Practical laboratory	Up to 10		