

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Medicine	
Course ID: ULBL/ B-GM1/09	Course name: Biology 1
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of ECTS credits: 4	
Recommended semester/trimester of the course: 1.	
Course level: I.II.	
Prerequisites:	
Conditions for course completion: For the successful completion of the subject, as "prerequisite for registration" in the follow-up subject Biology 2, it is necessary: 100% active participation in all practical lessons For successful completion of the subject, as "prerequisite for completion of the subject" Biology 2, it is necessary: obtaining at least 60% from each test	
Learning outcomes: To introduce the basic concepts of cell biology and molecular biology, including cell structure, biomacromolecules, cell cycle, cell reproduction, gene expression and cell communications. To give students a thorough grounding in the theoretical and practical foundations of molecular biology and cytology. Students have acquired an understanding of the major concepts in cell and molecular biology and have obtained basic information related to cytogenetics in clinical practice.	
Brief outline of the course: Biomacromolecules – the fundamental components of biological macromolecules, common characteristics, the structure and function of saccharides, lipids, proteins and nucleic acids. Cell structure – prokaryotic and eukaryotic cells, cell organelles, their structure and function. General characteristic of biomembranes, molecular structure of biomembranes; movement of molecules through the membrane. The structural organization of genome - organization of DNA in genomes, the basic principles of human cytogenetics. Replication of DNA. Cell cycle – phases, control of cell cycle, mitosis, meiosis, spermatogenesis, oogenesis. Cell signalling. Gene expression – gene structure and function, transcription, post-transcriptional RNA processing, translation, synthesis of proteins, posttranslation modifications, regulation of gene expression. The basic principles of epigenetics. Cell differentiation, cell ageing and cell death. Genomics and medicine.	
Recommended literature: Židzik J. et al.: Medical Biology and Genetics. Second edition, Equilibria, 2015, 296 p. Mičková et al.: Biology: practical lessons. Second edition, Equilibria, 2020, 98 p.	
Course language: English	

Notes:

English language

Course assessment

Total number of assessed students: 3858

abs	abs-A	abs-B	abs-C	abs-D	abs-E	neabs
35.04	3.01	4.1	9.23	17.76	19.7	11.17

Provides: prof. RNDr. Ján Šalagovič, PhD., RNDr. Helena Mičková, PhD., RNDr. Jozef Židzik, PhD., RNDr. Viera Habalová, PhD., RNDr. Lucia Klimčáková, PhD., doc. RNDr. Peter Solár, PhD., RNDr. Martina Šemeláková, PhD., RNDr. Eva Slabá, PhD.

Date of last modification: 06.03.2023**Approved:**