

COURSE DESCRIPTION

Academic year: 2022/2023	
University: Comenius University Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KFT/05-Bc/00	Course title: Biology
Educational activities: Type of activities: lecture / laboratory practicals Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 1.	
Educational level: I.	
Prerequisites:	
Course requirements: Student assessment consists of two written parts. Control test - exercises - the result is 20% of the total evaluation of the subject. Exam - written test - the result is 80% of the total evaluation of the course. In each written part, the student must achieve at least 60% success rate Grade Rating (%) A 100.00 - 92.00 B 91.99 - 84.00 C 83.99 - 76.00 D 75.99 - 68.00 E 67.99 - 60.00 FX <60.00	
Learning outcomes: By completing the course the student acquires basic information about the position of molecular and cell biology in the pharmaceutical study and the scientific field of Pharmacy. The acquired knowledge is the basis for related medical disciplines: physiology, pathology, biochemistry, immunology, microbiology, molecular and general pharmacology, clinical disciplines and forms the basis for understanding the effects of biologically active molecules - drugs.	
Class syllabus: <ul style="list-style-type: none"> - - Chemical composition of living matter, biologically active macromolecules - carbohydrates, lipids, proteins, nucleic acids - - Basic cell structure, cell theory, phylogeny, origin of cells and multicellular organisms. prokaryotic and eukaryotic cell. Non-membrane cell structures - cytology in terms of cell morphology and structure, - - Cell membrane, membrane organelles, their structure and function - - Membrane transport, cell connections. - - Biocommunication, cellular receptors - - DNA replication and DNA repair mechanisms - - Gene expression - basic principles and regulation of transcription and translation. 	

<ul style="list-style-type: none"> - - Cell division and cell cycle, cell death - - Germ cells, sexosomes, insemination. Ontogenesis. Stem cells - - Chromatin, chromosomes, HUGO project. Introduction to genetics, Mendel's laws, investigative methods in genetics, human genetics, mutations, genetic engineering - - Cellular and molecular biology of cancer, oncogenes, tumor suppressor genes, metastases 																				
<p>Recommended literature:</p> <ul style="list-style-type: none"> - Alberts, Bruce, et al. Essential cell biology. Garland Science, 2015.. - Alberts, Bruce, et al. Molecular biology of the cell. WW Norton & Company, 2017. - Lodish, Harvey, et al.: Molecular Cell Biology, eight edition, W.H.Freeman and Company, 2016 - Kyselovič, J., Musil, P .: General Biology - Theoretical and Practical Instructions for Exercises: Stimul Bratislava, 2008, 124p. 																				
<p>Languages necessary to complete the course: Slovak</p>																				
<p>Notes:</p>																				
<p>Past grade distribution Total number of evaluated students: 351</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>A</th> <th>ABS</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>FX</th> </tr> </thead> <tbody> <tr> <td>8,83</td> <td>0,0</td> <td>12,54</td> <td>19,09</td> <td>27,35</td> <td>28,77</td> <td>3,42</td> </tr> </tbody> </table>							A	ABS	B	C	D	E	FX	8,83	0,0	12,54	19,09	27,35	28,77	3,42
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<p>Lecturers: Mgr. Ondrej Sprušanský, PhD., Mgr. Lenka Bies Piváčková, PhD., PharmDr. Katarína Hadová, PhD., PharmDr. Csaba Horváth, PhD.</p>																				
<p>Last change: 13.12.2021</p>																				
<p>Approved by: Mgr. Ondrej Sprušanský, PhD.</p>																				