UNIVERSITY OF BANJA LUKa

Faculty of Medicine

Deparmtent of Human genetics

School year	Course	Study program	Cycle study	Year of study	Semester	Number of students	Number of practical groups
2026/2027.	Biology of cell and human genetics	Medicine	First	First	I		

PLAN AND PROGRAM OF LECTURES

Week I	Lecture	Tematic unit	Day	Date	Time	Place	No.of classes	Professor
I	1	Introduction to Cell Biology. research methods in Cell biology	Monday	5.10.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
II	2	Evolution of the cell	Monday	12.10.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
III	3	Chemical components of the cell: water, ions, elements, carbohydrates, lipids, nucleic acids and proteins.	Monday	19.10.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
IV	4	Structure of acellular forms of life (viruses, prions and viroids).	Monday	26.10.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
V	5	Organization of the prokaryotic cell (bacteria and cyanobacteria).	Monday	2.11.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
VI	6	Organization of the eukaryotic cell (animal and plant).	Monday	9.11. 2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović

VII	7	Structure and role of membranes and membrane transport	Monday	16.11. 2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
VIII	8	Structures and roles of cytoskeleton , centrioles , cilia and flagella, endoplasmic reticulum, Golgi complex	Monday	23.11. 2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
IX	9	Structure and role of lysosomes , peroxisomes	Monday	30.11. 2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
X	10	Glycolysis, cellular respiration, enzymes	Monday	7.12.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
XI	11	Structure and role of ribosomes and nucleus	Monday	14.12. 2025.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
XII	12	Chromosomes, DNA, RNA	Monday	21.12.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
XIII	13	Cell cycle. Apoptosis	Monday	28.12.2026.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
XIV	14	Medical cytology	Monday	11.1.2027.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović
XV	15	Test I	Monday	18.1.2027.	14:30-16:00	Blue hall	2	Prof. dr Vanja Vidović

PLAN OF EXERCISES

Week	Exercise	Thematic unit
I	E1	Microscope and usage of microscope. Methods in cellular research.
II	E2	Microscopic specimen production. Methods of cell cultures *in vitro*.
III	E3	Acellular form of life- viruses, prions and viroids.
IV	E4	Prokaryotic cell- bacteria and cyanobacteria
V	E5	Eukaryotic cell- algae and fungi
VI	E6	Plant cell- cell wall, cytoplasm, plastids
VII	E7	Animal cell- cell membrane and transport
VIII	E8	Animal cell- endoplasmic reticulum, Golgi complex, lysosomes and peroxisomes
IX	E9	Animal cell- mitochondria, cytoskeleton, centrioles, cilia and flagella
X	E10	Animal cell- nucleus and nucleolus
XI	E11	Mitosis and meiosis, gametogenesis
XII	E12	Techniques of chromosome analysis

XIII	E13	Apoptosis .
XIV	E14	Medical cytology
XV	E15	Colloquium 1