

Faculty: Faculty of Natural Sciences

Study program: Bachelor in Biology - Chemistry

Course Title: Cell Biology

Course Credits: 5

Language of Instruction: Albanian

Course Description: A study of the internal organization of the eukaryotic cell, organelle and membrane function, cell-cell signaling, cell movement, cell adhesion, the extracellular matrix. The subject gives knowledge about cell construction, chemical composition and physical - chemical qualities, reactions of energy transformation in the cell. Also, it gives knowledge about molecular structure of the cell, protein synthesis and cell cycle.

Course Goals: By doing this course well, students will develop basic knowledge and skills in cell biology and become aware of the complexity and harmony of the cell. As students proceed through the topics, they will be able to apply this knowledge, skill, and awareness to topics like the following: Basic properties of cells, Prokaryotic and eukaryotic cells, Viruses, Biological molecules: carbohydrates, lipids, proteins, and nucleic acids, Techniques used in cell and molecular biology, Enzymes, Metabolism, Mitochondrion structure and function, Chloroplast structure and function, Plasma membrane composition, structure, and function, The movement of substances across cell membranes, The endomembrane system, The extracellular matrix, The structure and function of the nucleus, Genes and chromosomes, DNA replication, Transcription, Translation, Cytoskeleton and cell motility, Cellular reproduction.

Course Requirements: Attendance of lectures by a student is facultative. Attendance of laboratories is compulsory at 100%. Attendance of seminars is compulsory at 75%.

Grading: The final assessment is made with 100 points. Continuous assessment during the academic year, 20 points

Course Schedule: The course takes place during the first semester, for 15 weeks, and for each week there are 2 hours lectures, 1 hour of seminars and 1 hour of laboratory .