

Level: bachelor			
Course title: Biophysics			
Status: elective			
ECTS: 6			
Requirements: none			
Learning objectives Qualifying students for indirect inclusion into modern aspects of research of one of the youngest multidisciplinary areas.			
Learning outcomes After completion of the course student should have developed: - General skills: broad exposure to research in biophysics and physical biology, with emphasis on the critical evaluation of scientific literature. - Subject-specific skills: Physical approach of living systems physiology– from cellular level to ecosystems level. Introduction to the laws of natural occurrences and properties of materials based on the application in modern biophysical problems.			
Syllabus <i>Theoretical instruction</i> Structure, synthesis and characterization of biopolymers, genetic code problem, , physics of membrane and nerve impulse, locomotor system and biomechanical processes, electrophysiology of EKG, EEG and MEG signals, interaction of organism and environment, non-equilibrium thermodynamics of bio-system, elements of neural networks, biomaterials, nano-medicine and nano-pharmacy, application of electromagnetic radiation and radioactive radiation in food technology, basic pollution of air and water. <i>Practical instruction</i> Solving practical problems related to this area of science.			
Weekly teaching load			Other:
Lectures: 3	Exercises: 2	Other forms of teaching: 1	Student research: