

Course Unit Descriptor

<b>Study Programme:</b> Physics			
<b>Course Unit Title:</b> Biophysics			
<b>Course Unit Code:</b> F18BF			
<b>Name of Lecturer(s):</b> Full Professor Maja Stojanović			
<b>Type and Level of Studies:</b> Bachelor			
<b>Course Status (compulsory/elective):</b> Elective			
<b>Semester (winter/summer):</b> Winter			
<b>Language of instruction:</b> English			
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face			
<b>Number of ECTS Allocated:</b> 6			
<b>Prerequisites:</b> None			
<b>Course Aims:</b> Qualifying students for indirect inclusion into modern aspects of research of one of the youngest multidisciplinary areas.			
<b>Learning Outcomes:</b> 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.			
<b>Syllabus:</b> <i>Theory</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>Practice</i> Solving practical problems related to this area of science.			
<b>Required Reading:</b> Rodney Cotterill, Biophysics: An Introduction, Wiley, 2002			
<b>Weekly Contact Hours:</b>	<b>Lectures:</b> 3	<b>Practical work:</b> 2	
<b>Teaching Methods:</b> Theoretical classes are performed using modern methods of presentation, with the active participation of students, a practical training includes laboratory exercises and preparation and presentation of a seminar work			
<b>Knowledge Assessment (maximum of 100 points):</b> 100			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class		written exam	30

participation			
Practical work		oral exam	40
Preliminary exam(s)		.....	
Seminar(s)	30		