

Study Program: Biology				
Type and level of studies: Bachelor studies				
Course name: Neurophysiology				
Lecturer: Milošević M. Slaviša				
Status: Compulsory				
ECTS: 5				
Attendance Prerequisites:				
Course aims Enabling students to get acquainted with modern research trends of one of the most unexplored biological disciplines and to induce them with the structure and physiology of the nervous system, so that they can understand the relationship between receptors, neurons and effectors, their interdependence and the ways in which information is transmitted to the brain.				
Course outcome Enabling students to understand the function of brain structures, including some of the most complex mental processes.				
Course content <i>Theoretical part:</i> Introduction to neurophysiology and neurochemistry. The structure of the nervous system. Cytological characteristics of a nerve cell. Types of glial cells and their function. Synapse - structure and function. Synaptic transmission. Sequence of events in synaptic transmission (chemical synapse). Brain chemistry: neurotransmitters, peptides and other active molecules (synthesis and degradation). Signal transduction, G-proteins, secondary messengers. Retrograde neurotransmission. The role of nitric oxide in retrograde signaling, learning and memory. Synaptic transmission disorders - possible sites of drug action on the nervous system. Embryonic development and molecular mechanisms in the development of the nervous system. Nervous system diseases (Parkinson's, Alzheimer's and Multiple sclerosis). A brief course of human central nervous system anatomy. <i>Practical Part: Exercises</i> Demonstration exercises, studying individual links of the reflex arc. Presenting electrical phenomena on neuromuscular preparations.				
Literature 1 Guyton AC. Медицинска физиологија, Медицинска књига, Београд 2003 2. Ganong WF. Преглед медицинске физиологије. Савремена администрација Београд, 1975. 3. Пашић М. Физиологија нервног система. Научна књига, Београд, 1987.				
Number of active classes				Other classes
Lectures: 2	Practical classes: 2	Other forms of teaching: 0	Students' research work	
Teaching methods Lectures, term tests, tests.				
Assessment (maximum 100 points)				
Course assignments	points	Final exam		points
activity during lectures	10	written exam		
practical classes	10	oral exam		50
Term test/s	30			
Total				50