

Level: Bachelor				
Course title: Cell and Tissue Biology, B-101				
Status: Obligatory				
ECTS: 8				
Requirements: none				
Learning objectives Goal of this course is to introduce students with the main structural and ultrastructural characteristic of animal cells and tissues. Emphasis is placed on the integration of structure and function at the cellular level, and on the underlying biochemistry.				
Learning outcomes Students should able to demonstrate basic understanding of fundamental cell and tissues biology and understand relationship between the structure and their biochemical and physiological function.				
Syllabus <i>Theoretical instruction</i> 1. Cell biology. General characteristics and evolution of cell. Cell membrane. Cytoplasm. Membranous and Nonmembranous Organelles (Centriol. Ribosomes. Endoplasmatic reticulum. Golgi apparatus. Lysosomes. Peroxisomes. Mitochondria, Cytoskeleton, Cilia and Flagella. Nucleus). Cytoplasmatic inclusions. Cell Cycle. Aging of Cell. Cell Death. 2. Tissues biology. Epithelial tissues (simple and stratified epithelium, glandular epithelium, sensory epithelium). Muscle tissue (smooth muscle, skeletal muscle, cardiac muscle). Connective tissue (mesenchymal tissue, mucous connective tissue, dense irregular connective tissue, loose connective tissue, dense regular connective tissue, adipose tissue, blood, cartilage, bone and ossifications). Nerve tissue (nerve cells, neuroglial cells, synapses). <i>Practical part</i> Laboratory practice covers: studies using electronmicrographics of the animal cell organelles and light microscopy examinations of the structure of animal tissues (epithelial tissue, connective tissue, muscle tissue, nerve tissue) using permanent preparations – slides.				
Weekly teaching load				Other:
Lectures: 3	Exercises: 3	Other forms of teaching:	Student research:	