

Course name: Histology with elements of embryology (USOS Code: B-BMED.2006Eng)

ECTS: 2

No. of hours: 30 (15 lectures + 15 classes)

Course coordinator: dr hab. Monika Hułas-Stasiak, prof. UMCS

Prerequisites: Completed courses in Human anatomy and Cell biology

Course description: Lecture: General structure of the animal's body - hierarchy from cell to organism; tissues that make up the animal's body: epithelial, connective, muscle and nervous tissue – their structure and functions; digestive system – histological structure and functions of individual organs; cardiovascular and lymphatic system - histological structure and functions of individual elements; male and female reproductive systems (structure and hormonal regulation); selected elements of embryology (fertilization, early stages of embryonic development - cleavage, gastrulation, neurulation, implantation, fetal membranes, placenta).

Laboratory: structure of animal tissues – microscopic observations respiratory and urinary systems - histological structure and functions of individual organs; nervous system and endocrine system (histology of the spinal cord, cerebellum and cerebral cortex, adrenal glands, pituitary gland, pineal gland and thyroid gland); microscopic observations of selected organs of the digestive system (esophagus, stomach, small and large intestine, liver and pancreas) and circulatory system (vein, artery, capillaries, lymph node, spleen); sense organs: sight, hearing, skin – epidermis and its products; dermis and subcutaneous tissue; male and female reproductive systems – microscopic observations; learning about the early stages of embryo development on the example of frog and chicken embryos (cleavage, gastrulation, neurulation, organogenesis). Formation, structure and functions of the human placenta.

Recommended literature: Stevens A., Lowe J. Human Histology, 2010. Krstic, R.V.: Human Microscopic Anatomy (ed. Springer-Verlag). Sadler TW. Medical Embryology. Lippincott Williams and Wilkins, 2006. Gilbert SF. Developmental biology, 9th edition. Sinauer Associates, 2010.