CONTENT OF THE SUBJECT

Subject:	**Histology and Embryology 2**		
Study	*General Medicine*	**Study Period:**	*2nd year Winter semester*
Evaluation:	*Graduated (A-E)*	**Subject Type:**	*Compulsory*
Content:	*2 h lectures and 4 h practical exercises / week*		*Total: 28/56 hours*

Department: **Department of Histology and Embryology, UPJŠ FM**

Week	***Lectures*** https://portal.lf.upjs.sk/index-en.php	***Practical exercises***
1.	**Microscopic structure of cardiovascular system** General structure of blood vessels. Arteries – elastic and muscular, veins, types of capillaries. Heart - endocardium, myocardium, pericardium, conducting system.	**Skin, hairs and glands -** skin, lip. **Mammary glands** – active and non active. Tissue repetition.
2.	**Development of cardiovascular system** Early heart development, later heart development. The aortic arches. Prenatal and postnatal circulation. Malformations of the heart and great vessels.	**Cardiovascular system –** heart, aorta, elastic artery, muscular artery and vein.
3.	**Microscopic structure and development of lymphoid system** Tonsils, lymph nodes, thymus, spleen - histophysiology. Histogenesis.	**Lymphoid system –** thymus, lymph node, spleen, palatine tonsil, lingual tonsil.
4.	**Digestive tract I** Oral cavity, tongue, teeth, general structure of digestive tract, oesophagus, stomach, small intestine, large intestine.	**Digestive system I –** lip, tongue, tongue – papilla vallata, tooth, oesophagus, oesophagus - cardia
5.	**Digestive tract II** Glands associated with the digestive system: parotid, submandibular and sublingual gland, liver, gallbladder, pancreas.	**Digestive system II –** stomach body, pylorus, small intestine - duodenum, jejunum; large intestine; appendix vermiformis
6.	**Digestive tract III** Development of the teeth, salivary glands, tongue. Development of the forgut, midgut and hindgut. Development of the liver and pancreas.	**Digestive system III –** parotid gland, submandibular gland, sublingual gland, pancreas, liver, gallbladder.
7.	**Microscopic structure and development of respiratory system** Nasal cavity, nasopharynx, larynx, trachea, bronchial tree, lung – conducting and respiratory portion. Blood-air barrier. Development of the lungs, pleural canals.	**Respiratory system** - epiglottis, trachea, lung.

8.	**Microscopic structure of the urinary and genital system** Kidney, nephron, urinary passages. Male genital system – testis, genital ducts, prostate. Female genital system – ovary, uterine tube, uterus.	**Urinary system -** kidney, ureter, urinary bladder.
9.	**Development of the urinary and genital system** Pronephros, mesonephros, metanephros. Development of the male genital system – testis and genital ducts. Development of the female genital system – ovary, uterine tube, uterus, vagina.	**Male reproductive system -** testis, epididymis, ductus deferens, spermatic cord, seminal vesicles, prostate.
10.	**Development of the face and neck** Face, nasal and oral cavity, palate. Branchial arches, pharyngeal pouches, branchial grooves and membranes.	**Female reproductive system -** ovary, uterine tube, uterus - proliferatory and secretory phase, vagina.
11.	**Microscopic structure and development of the endocrine system** Hypophysis, histophysiology of the adeno- and neurohypophysis, hypothalamo-hypophyseal tract. Thyroid gland, parathyroid gland, suprarenal gland, Langerhans islets.	**Female reproductive system, embryology -** placenta, umbilical cord.
12.	**Central and peripheral nervous system** Brain, cerebellum, spinal cord, myeloarchitecture and cytoarchitecture of the CNS. Meninges, hematoencephalic barrier. Spinal ganglia, peripheral nerves.	**Endocrine system -** hypophysis, thyroid gland, parathyroid gland, suprarenal gland, pancreas.
13	**Development of the nervous system** Development and histogenesis of neural tube. Brain vesicles, prosencephalon, mesencephalon, rhombencephalon.	**Central and peripheral nervous system -** cortex cerebri, cerebellum, spinal cord, craniospinal ganglion, peripheral nerve.
14.	**The sensory organs** Eye, ear and vestibulocochlear apparatus. Microscopic structure and histogenesis.	**Final slide test**