CONTENT OF THE SUBJECT

Subject:	**Histology and Embryology 2**		
Study	*General Medicine*	**Study Period:**	*2nd year Winter time*
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***	***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
4.	**Digestive system I** Oral cavity, tongue, teeth. General structure of digestive tract, oesophagus, stomach, small and large intestine.	**Digestive system I –** lip, tongue, tongue – papilla vallata, tooth, oesophagus, oesophagus - cardia
5.	**Digestive system II** Microscopic structure of gl. parotis, gl. submandibularis and gl. sublingualis. Microscopic structure and function of liver, gall bladder and pancreas.	**Digestive system II –** stomach - fundus, pylorus, small intestine (jejunum), large intestine (colon), appendix vermiformis
6.	**Digestive system III - development** Development of the foregut, 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 and diaphragm.	**Respiratory system** - epiglottis, trachea, lung
8.	**Microscopic structure of the urinary and genital system** Kidney, nephron, urinary passages. Male genital system – testis, genital ducts, genital glands, external genitalia. Female genital system – ovary, uterine tube, uterus, vagina, external genitalia.	**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, 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. Development of endocrine glands.	**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, spinal ganglion, peripheral nerve

14.	**The sensory organs** Microscopic structure and development of eye and ear.	**Semestral slide test**