

STUDY BRANCH: **General Medicine**  
SUBJECT: **Histology and Embryology**

YEAR OF EDUCATION: **1**

TERM: **Winter**

**EXERCISES**

NUMBER OF TEACHING HOURS PER WEEK: **3**

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1<sup>st</sup> teaching week:

**Histologic technics** – tissue sampling, fixation, dehydration, clearing, embedding, sectioning, staining and mounting. Light and electron microscopy.

2<sup>nd</sup> teaching week:

**Cytology, the size and the shape of the cells.**

Observation under the light microscope:

spinal ganglion – round cells

spinal cord – star-shaped cells

cerebellar cortex – pear-shaped cells

small intestine – goblet cells

3<sup>rd</sup> teaching week:

**Epithelial tissue I.** – simple covering epithelium.

Observation under the light microscope:

lung- simple squamous epithelium

kidney – simple cuboidal epithelium

gallbladder – simple columnar epithelium

epididymis – pseudostratified columnar epithelium with stereocilia

trachea – ciliated pseudostratified columnar epithelium

4<sup>th</sup> teaching week:

**Epithelial tissue II.**– observation under the light microscope:

ureter – transitional epithelium

vagina - stratified squamous nonkeratinized epithelium

skin – stratified squamous keratinized epithelium

5<sup>th</sup> teaching week:

**Connective tissue I.**– observation under the light microscope:

skin , papillary layer – loose connective tissue

skin, reticular layer - dense irregular connective tissue

tendo – dense regular connective tissue

histiocytes

6<sup>th</sup> teaching week:

**Connective tissue II.**– observation under the light microscope:

adipose tissue

aorta – elastic tissue

lymph node – reticular tissue

umbilical cord – mucous tissue (embryonic)

7<sup>th</sup> teaching week:

**Cartilage** – observation under the light microscope:

trachea – hyaline cartilage

epiglottis – elastic cartilage

cartilago fibrosa – fibrocartilage

8<sup>th</sup> teaching week:

**Bone** – observation under the light microscope:

long bone – lamellar compact bone and spongy bone

ossification

9<sup>th</sup> teaching week:

**Ossification** – endochondral, intramembranous

10<sup>th</sup> teaching week

**Muscle tissue** – observation under the light microscope:

tongue – skeletal muscle

myocardium – cardiac muscle

small intestine – smooth muscle tissue

11<sup>th</sup> teaching week:

**Nerve tissue** – observation under the light microscope:

spinal cord – nerve cells

cerebellum – glial cells

12<sup>th</sup> teaching week:

**Blood and blood cells** - observation under the light microscope:

blood smear – red and white blood cells

13<sup>th</sup> teaching week:

**Hemopoiesis.** Observation under the light microscope: bone marrow.

Development of erythrocytes, development of granulocytes,

development of agranulocytes

14<sup>th</sup> teaching week:

**Examination of slides.**