

STUDY BRANCH: **General Medicine**

SUBJECT: **Histology and Embryology**

YEAR OF EDUCATION: **1**

TERM: **Winter 2012/2013**

**LECTURES**

NUMBER OF TEACHING HOURS PER WEEK: **2**

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

**The subject matter of histology.** Development of the Histology, credit system, composition of the cells, intercellular substance and tissue fluid, cell membrane, transmembrane transport.

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

**Cytology** – general structure of eukaryotic cell, cytoplasmic matrix, cell organelles membrane limited/unlimited, cytoplasmic inclusions, nucleus and nucleolus.

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

**Epithelial tissue I.** – covering epithelium, cell junctions – zonula occludens, zonula adhaerens, macula adhaerens.

4<sup>th</sup> teaching week

**Epithelial tissue II.** – glandular epithelium, secretory and duct portion.

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

**Connective tissue proper** - classification of connective tissues, loose connective tissue, dense connective tissue, connective tissue with special function.

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

**Cartilage** – cells , intercellular substance, hyaline, elastic and fibrocartilage.

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

**Bone tissue I.** – compact and spongy bone.

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

**Bone tissue II.** Endochondral and intramembranous ossification.  
Hemopoiesis - development of erythrocytes.

9<sup>th</sup> teaching week

**Muscular tissue I.** - striated skeletal muscle, light and electron microscopic structure, function.

10<sup>th</sup> teaching week

**Muscular tissue II.** -cardiac muscle, smooth muscle tissue. Afferent and efferent nerve endings.

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

**Nerve tissue** - neuron and its processes – dendrites and axon, synapses, myelin sheath.  
Neuroglial cells – astrocytes, oligodendrocytes, microglial cells, ependymal cells.

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

**Embryology I. Developmental principles in the ontogenesis.**

Gametogenesis, fertilization, implantation. First week of human development.

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

**Embryology II. Second and third week of human development.**

Primitive streak, development of mesoderm, notochord, neurulation.

Primitive cardiovascular system.

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

**Final test.**