

**Syllabus of medical ,Histology Anatomy ,BIOLOGY,
AND EBRYOLOGY.**

First Term

- Basic histology and histological techniques . 2hr.
 Light Microscopy ;-_ 2hr.
 -Principals and type of light microscopes. - 2hr
 - The use of light microscope and photomicrography.
 Preparation of tissues for light microscopy. 3hr.
 - Smear and squash techniques. 1hr.

2. Basic Histology; 4hr.
 A.Epithelial tissue;
 a.Classification of epithelium.
 b. Cell Adhesion in epithelial membranes.
 c.Specialization of cell surfaces in epithelia.
 d. Glands and secretions.

- 3.Connective tissue;- 6hr.
 a.Tissue fluid.
 b.Inter cellular substances.
 c.Cells of connective tissue.
 d.Types of connective tissue proper.

- 4.Specialized connective tissue;
 a.Cartilages
 b.Bone.
 c. Blood
 d. Adipose tissue.

- muscular tissue;- 4hr.
 a.Skeletal muscle.
 b.Cardiac muscle.
 c.Smooth muscle.
 d.Histogenesis of muscular tissue.
 e.Regeneration of muscular tissue.

- E.Nervous tissue;- 2hr.
 a.Introduction.

b. Neuron and neuroglial cells.

*******Other topics will be covered within the neuro-anatomy course in the second term .**

Medical Biology

1. History of cell biology.
2. Cell structure.(Introduction).
3. Chemistry of the cell.
4. Cell structure plasma membrane.
5. Movement of molecules into and out of the cells.
6. Cytoplasm and nucleus.
7. Cell cycle (Mitosis and Meiosis).
8. Molecular genetics and protein synthesis.
9. Human cytogenetics (Chromosome and gene).
- 10.Regulation of gene activity.
- 11.Gene and gene mutation .
- 12.Recombinant DNA and biotechnology.
- 13.Experiment in molecular biology.
- 14.Cell signaling.

2- Histology

47 Hrs.

Lectures of medical histology for second year students .

1. Vascular system .

Assis. Prof. Khalida K. Jbara

Lec .

- Introduction.
- Blood vascular system .
- Capillaries .
- Type of capillaries (continuous and fenestrated) .
- Arteries . (Arteriole , small arteries , medium sized arteries ,Large elastic arteries) .
- Age changes in arteries . (Atherosclerosis) .
- Veins . (Venule , small vein , medium sized vein , large vein) .
- Vasa vasorum .
- Arterio-venous anastomoses . (Direct and indirect (Hoyer or Shunt)).

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- The heart . Chambers , Layers (Endocardium , Myocardium and Epicardium) .
- Lymph vascular system . Lymph , Lymph capillaries and Lymph vessel

2. The skin and its appendages . Lect . Wafaa Sabry

- Thick skin .
- Thin skin .
- Epidermis
- Dermis .
- Hair Follicle .
- Nail.
- Glands of skin (Sweat gland, Sebaceous gland)
- Sensory nerve endings (Pacinian and Meissners corpuscles) .

3. Lymphatic system . Lec. Wafaa Sabry

- Lymphatic organs :-
- Lymph node .
- Pharyngeal tonsil .
- Palatine tonsils .
- Spleen .
- Thymus .

3. Heamopoiesis . Lec. . Wafaa Sabry

4. Digestive system . Assis . Prof . Khalida

- Introduction .
- General function.
- Oral cavity :- Lip , Tongue , cheeck , Teeth , Gum , Hard palate , soft palate .
- The salivary glands .
- Esophagus .
- Stomach . (Cardiac , Fundic, Pyloric ,) .
- Small intestine (Duodenum , Jejunum , Ileum)
- Peyers patches .

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-Large intestine . (Ceacum ,colon , rectum , Anal canal).

- Appendix .

- Assosiated glands (Liver , Pancreas, Gall bladder) .

Lec . Wafaa Sabry

5. Nervous system .

Lec . Dr. Eman Ali

- Introduction .

- Types of neuron .

- Classification.

- Peripheral nervous system . (Nerves and ganglia) .

- Cranio – spinal ganglia ,

- Autonomic ganglia .

- Central nervous system .

- Spinal cord .

- Cerebrum .

- Cerebellum .

- Meninges .

- Dura matter .

- Blood brain barrier .

- Choroids plexus .

Respiratory system .

Lec. Wafaa Sabry

- Respiratory epithelium .

- The cell types of respiratory epithelium .

- Nasal cavity .

- Vestibule .

- Nasal fossae.

- Para nasal sinuses .

- The larynx .

- The trachea .

- The lungs .

- Bronchial tubes .

- Bronchioles .

- Alveolar duct .

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- Alveoli .
- Respiratory membrane .

The endocrine system .

Assist . Proff .

Khalida Introduction .

- Definition of endocrine glands .
- Types of endocrine glands .
- Types of secretion .
- Pituitary gland .
- Thyroid gland .
- Parathyroid gland .
- Adrenal gland (Supra renal).
- Pineal body .
- (Introduction ,Structure , function) .

The urinary system .

Lec . Wafaa Sabry

- Introduction .
- The kidneys .
- Structure .
- The excretory passages of the kidney . (The nephron).
- Ureter .
- urinary bladder .
- Male urethra .
- Female urethra .

Female reproductive system .

Assist Proff . Khalida

- Introduction .
- The ovaries .
- Types of the follicles .
- Development of ovarian follicles .
- Atretic follicle .
- Corpus luteum of ovarian cycle .
- Corpus luteum of pregnancy .
- Corpus albicans .

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- Ovulation .
- The uterine tube (Fallopian tube) .
- The uterus .
- The Menstrual cycle .
- The cervix .
- The Vagina .

Mammary glands .

Assist Proff. Khalida

1 Introduction .

- Areola and nipple .
- Structure .
- Duct system .
- Inactive mammary glands .
- Mammary gland during pregnancy .
- Lactating mammary gland .

Male Reproductive system .

Assist Proff Khalida

- Introduction .
- Parts of male reproductive system .
- Testis .
- Seminiferous tubules .
- Genital ducts (Rete testis , Ductuli afferents , Ductus epididymis, Ductus deferens , Ejaculatory duct .
- Accessory glands associated with male reproductive system.
- Prostate gland .
- Seminal vesicles .
- The penis.
- Semen .

Special sense organs .

Lec. Dr. Eman Ali

- The eyes .
- Introduction .
- Layers of the eye . (Corneo – sclera, U vea layer Ciliary's portion & choroids) , The retina .

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- Chambers of the eye .
- Iris .
- Lens .
- Schlemm canal .
- Lacrimal gland .

The ear .

- Introduction .
- External ear , Middle ear , Inner ear .

Gross Anatomy.

1. General anatomy.

- a. The importance of anatomy. 1hr.
- b. The characteristic of human body compared with other species.

c. An outline of preservation of human cadavers (embalming and plactination.)

2hr.

d. The tissue of the body.

4hrs

-Anatomical study of tissue.

-The tissue of goints.

-Mucous membrane and glands.

-Anatomical methods employed in the study of nervous system.

2. The genital system .

6hrs

-Uterus.

-Ovaries.

-Pelvic diaphragm.

-Perineum

2. Head and neck; 12hrs

a. Posterior triangle.

b. Brachial plexus.

c. Anterior triangle.

d. Fascial nerve.

e. Parotid gland.

f. Trigeminal nerve.

g. Orbit

h. Lacrimal apparatus.

I. Cervical fascia.