



**University of Benghazi
Faculty of Medicine
Histology 1 Course**

Histology is one course of the basic requirement of the human medical program. It's taught in the first year. The number of study hours is 122 hours.

The course aims to :

1. Acquire comprehensive knowledge on the fundamental concepts of human cell biology and histology with emphasis on microscopic structure, organization and relationships of various cells, tissues and organs of the human body
2. Acquire the skills to describe the histological structure of different cells and tissues correlated with function and medical application .
3. Gain the necessary knowledge in the field of histological techniques and their application
4. Acquire knowledge on the basis of medical genetics and related genetic diseases.
5. Acquire critical thinking and problems solving skills for self and lifelong learning
6. Acquire communication, and team working skills that are essential for them to become active members in society

Learning Outcomes

Knowledge and understanding

- Describe the histological structure of normal cells of the human body and their function
- Describe the histological structure of normal tissues of the human body, molecular aspects and their function such as epithelial, connective, muscular nervous tissue and blood

- Recognize the functional histology of some organs and systems of the human body and related medical correlation including cardiovascular, and immune system
- Identify some histological techniques, namely: tissue preparation, methods of studying of living cells and tissues and different types of microscopes e.g. paraffin section
- Recognize the basis of genetics including: structure of the human genome, function, genetic variations, underlying genetic disorder and the modes of inheritance of diseases in families

Intellectual skills

- Correlate the histological structure and function of cells and tissues of the human body with their related medical application.
- Correlate the histological structure and function of cardiovascular and immune and lymphoid organs with their related medical application.
- Differentiate between the epithelial, connective, muscle, nervous tissue, and the histology of cardiovascular, and immune system by different histological stain
- Distinguish between modes of inheritance, chromosomal aberrations

Practical and professional skills

- Identify the ultrastructure and cell organelles using electron microscope
- Illustrate the histological structure of cells and different tissues
- Identify karyotyping to detect abnormal number of chromosomes
- Describe epithelial, connective, muscle and nervous tissue under light and electronic microscope and the histology of blood, and immune system by various histological stains

General and learning methods

- Communicate effectively with their colleagues and teachers
- Be an influential part of a teamwork and aware of team dynamics
- Manage their time effectively

Teaching and learning methods

Illustrated lectures
Lab sessions

1. Teaching & Learning Methods:

Interactive Lecture, Practical lab training, Team-based learning (TBL)

2. Student Assessment Methods:

- Written short essay to assess the cognitive domain .
- MCQs, True/False questions, to assess the cognitive domain
- Slide examination to assess laboratory skills .
- Oral exam to assess the cognitive domain

References:

Lecture notes

Practical histology for 1st year students

Books

Book name
Anthony L. Mescher (2013). Junqueira's Basic Histology Text &Atlas 13 th McGraw-Hill Education
Leslie P. Gartner and James L. Hiatt (2007) Color textbook of histology, 3 th edition, Saunders, Elsevier
Ross, Michael H. (2011) Ross Histology: a text and atlas: with correlated cell and molecular biolog 6 th edition,
-J. Pasternak, (2005) An Introduction to Human Molecular Genetics, Mechanisms of Inherited Diseases, 2 nd edition, John Wiley & Sons Inc .
Snustad, M. Simmons (2012) Principles of Genetics 6th