

Ministry of Higher Education and Scientific research



Department of General Science

College of Basic Education

University of Salahaddin-Erbil

Subject: Histology

First Semester

Course Book – *For example* (Year 3)

Dr. Gihan H. Hamad

Academic Year: 2023/2024

Course Book

1. Course name	Histology
2. Lecturer in charge	Gihan H. Hamad
3. Department/ College	General Science/Basic Education
4. Contact	e-mail:gihan.hamad@su.edu.krd Tel: (optional)
5. Time (in hours) per week	For example Theory: 2 Practical: 0
6. Office hours	Availability of the lecturer to the student during the week
7. Course code	27
8. Teacher's academic profile	1. B. Sc. (1998-1999). 2. M.Sc.(2003). 3. Assistant lecture (2003).
9. Keywords:	Epithelium, connective, muscular tissue, nervous tissue, glandular tissue, proper connective tissue, specialized connective tissue.
10. Course overview:	
<p>In this section the lecturer shall write an overview about the subject he/she is giving. The course overview must cover:</p> <ul style="list-style-type: none"> ▪ Histology is the study of how tissues are structured and how they work. Knowing what a normal tissue looks like and how it normally works is important for recognizing different diseases. It also helps in figuring out what causes certain diseases, how to treat those diseases, and whether the treatment has worked. Histology can be considered as the study of anatomy and physiology at the microscopic level. ▪ First, and most important, histology should be studied within a larger context. You should be studying the human body as a coherent, integrated whole. Histology provides one perspective, but that perspective must be integrated with other perspectives (e.g., anatomy, physiology, biochemistry) to be meaningful. (Don't be like the blind men and the elephant.) Knowledge of histology should not be walled off, to be called upon only for passing histology tests. <p>The latest title in our "Basic Concepts" series, written for the student needing help in assimilating fundamental, often difficult concepts in the basic sciences. The conceptual framework is based on the building blocks of embryonic germ layers, leading to tissue types and organ structures. Because embryology is a subject which must be learned in large part by visual images, the book is highly illustrated (the author is also a medical illustrator), linking text and illustrations on the same or adjoining pages. The level of detail is geared directly to that which is required by students, and the book has been organized and written in a style which easily accesses the most relevant information.</p>	

11. Course objective:

Histology

By the end of the course students should be familiar with basic histology. The course gives the basis for understanding tissue structure at levels not visible to the unaided eye and the relationship between tissue structure and function. The course establishes a basis for learning histopathology and provides a basis for treating diseased and injured tissues.

12. Student's obligation

Answer questioning and The participation of students in the class.

13. Forms of teaching

We use data-show with whiteboard and give a copy of my lecture about Histology for all students.

14. Assessment scheme

First Examination: 20%

Second Examination: 15%

Quiz: 5%

Final Examination: 60%

15. Student learning outcome:

The program learning outcomes for this course includes:

- i. Knowledge capability
- ii. Technical capability
- iii. Communication skills
- iv. Reflective capability

16. Course Reading List and References:

1. Bock, Ortwin (2015). A history of the development of histology up to the end of the nineteenth century. *Research 2*: 1283

2. Bracegirdle, Brian (1977). The History of Histology: A Brief Survey of Sources. *History of*

3. Meli, Domenico Bertoloni (2017). *Visualizing disease: the art and history of pathological illustrations*. Chicago: The University of Chicago Press.
4. Weiss AT, Delcour NM, Meyer A, Klopfleisch R (2010). "Efficient and Cost-Effective Extraction of Genomic DNA From Formalin-Fixed and Paraffin-Embedded Tissues". *Veterinary Pathology*. **48** (4): 834–8. [doi:10.1177/0300985810380399](https://doi.org/10.1177/0300985810380399). [PMID 20817894](https://pubmed.ncbi.nlm.nih.gov/20817894/)
5. Bennike, Tue Bjerg; Kastaniegaard, Kenneth; Padurariu, Simona; Gaihede, Michael; Birkelund, Svend; Andersen, Vibeke; Stensballe, Allan (2016-03-01). "[Comparing the proteome of snap frozen, RNAlater preserved, and formalin-fixed paraffin-embedded human tissue samples](#)". *EuPA Open Proteomics*. **10**: 9–18. [doi:10.1016/j.euprot.2015.10.001](https://doi.org/10.1016/j.euprot.2015.10.001)
6. Coyne J. (2012). "A squamous cell carcinoma with a Saint Valentine's day message". *Int J Surg Pathol*. **20** (1): 62. [doi:10.1177/1066896911434768](https://doi.org/10.1177/1066896911434768). [PMID 22287650](https://pubmed.ncbi.nlm.nih.gov/22287650/)
7. Carlson, Bruce M.; Kantaputra, Piranit N. (2014). "4 Molecular Basis for Embryonic Development". *Human embryology and developmental biology* (5th ed.). Philadelphia, PA: Elsevier/Saunders. p. 59. [ISBN 978-1-4557-2794-0](https://www.isbn-international.org/product/978-1-4557-2794-0). the basic framework for understanding the molecular basis of embryonic development still rests largely on studies of developmental genetics in *Drosophila*.
8. Alberts, Bruce; Johnson, Alexander; Lewis, Julian; Raff, Martin; Roberts, Keith; Walter, Peter (2008). "22 Development of Multicellular Organisms". *Molecular biology of the cell* (5th ed.). New York: Garland Science. p. 1334. [ISBN 0-8153-4106-7](https://www.isbn-international.org/product/0-8153-4106-7). The future posterior end of the embryo contains a high concentration of mRNA for a regulator of translation called Nanos, which sets up a posterior gradient in the same way. The third signal is generated symmetrically at both ends of the egg.
9. Warn, RM (1986). "The cytoskeleton of the early *Drosophila* embryo". *Journal of cell science. Supplement*. **5**: 311–28. [PMID 3308915](https://pubmed.ncbi.nlm.nih.gov/3308915/). This type of embryo shows a separation of mitosis from cytokinesis during the early stages of development. Most cells are only formed when a syncytium of approximately 6000 nuclei are present.
10. Alberts, Bruce; Johnson, Alexander; Lewis, Julian; Raff, Martin; Roberts, Keith; Walter, Peter (2008). "22 Development of Multicellular Organisms". *Molecular biology of the cell* (5th ed.). New York: Garland Science. p. 1336. [ISBN 0-8153-4106-7](https://www.isbn-international.org/product/0-8153-4106-7). After the initial gradients of Bicoid and Nanos are created to define the antero-posterior axis, the segmentation genes refine the pattern.
11. Histology, A Text and Atlas, 5th ed., Michael H. Ross and Wojciech Pawlina, Lippincott Williams & Wilkins, 2006.
12. Junquiera's Basic Histology, Text and Atlas, 12th ed., Anthony L. Mescher,

McGraw Hill, NY, 2010.

13. Histology and Cell Biology, an Introduction to Pathology, 3rd ed., Abraham L. Kierszenbaum, Mosby, 2012.

17. The Topics:

Histology

1. Introduction to Histology
2. Definition of Cell, Tissue, Organ, System and Body.
3. Types of Tissue.
 - i. Epithelial tissue,
 - ii. Simple epithelium.
 - a. Simple squamous.
 - b. Simple cuboidal.
 - c. Simple columnar.
 - d. Simple ciliated columnar.
 - e. Pseudo stratified epithelium.
 - iii. Stratified epithellum.
 - a. Stratified squamous.
 - b. Stratified cuboidal.
 - c. Stratified columnar.
 - d. Stratified ciliated columnar.
 - e. Transitional epithellum.
 - iv. Glandular epithellum.
 4. Connective tissue.

<p>a. Connective tissue proper.</p> <p>b. Skeletal connective tissue.</p> <p>c. Vascular connective tissue.</p> <p>5. Muscular tissue.</p> <p>a. Smooth muscle.</p> <p>b. Skeletal muscle.</p> <p>c. Cardiac muscle.</p> <p>6. Nervous tissue.</p> <p>a. Peripheral nervous system.</p> <p>b. Central nervous system.</p>	
18. Practical Topics (If there is any)	
There is not practice.	
19. Examinations: 1. Compositional: Define the following: Cleavages-blastomere-tissues.	
20. Extra notes:	
21. Peer review	پیداچونہوہی ہاوہل

