



1.	Course title	General Histology	
2.	Course number	0502111	
3.	Credit hours	1 Theory	1 Practical
	Contact hours (theory, practical)	14 Lectures and 14 Labs	
4.	Prerequisites/Corequisites	--	
5.	Program title	MD	
6.	Program code	05	
7.	Awarding institution	The University of Jordan	
8.	School	School of Medicine	
9.	Department	Anatomy and Histology Department	
10.	Course level	Bachelor	
11.	Year of study and semester (s)	First year/ Second Semester	
12.	Other department (s) involved in teaching the course	-	
13.	Main Learning language	English	
14.	Learning Types	<input type="checkbox"/> Face to face learning <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15.	Online platforms(s)	x <input type="checkbox"/> Moodle <input type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16.	Issuing/Revision Date	20/02/2025	

17. Course Coordinator:

Name: **Dr. Ghada Abuelghanam**

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**18. Other instructors:**

Name:	Contact hours:
Office number:	Phone number:
Email:	

19. Course Description and Aims:**A- Course Description:**

This course covers the microscopic structure of cells and tissues of the human body. The course deals with various histological structures of basic tissues (epithelium, different types of connective tissues, including: adipose tissue, bone and cartilage), muscle tissue and nervous tissue). Additionally, this course examines and analyzes the materials being studied using both light and electron microscopy micrographs. Functional correlations often with some elements of clinical significance are presented throughout the course.

B- Aims:

The aim of this course is to provide students with a thorough understanding of the microscopic appearance and function of normal cells and tissues in the human body. The course covers the microanatomy of the four basic tissues, namely: epithelial tissue, including glandular tissue, connective tissue, muscular tissue, and nervous tissue.



20. Program Intended Learning Outcomes (PLOs) (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program):

- 1. Demonstrate basic knowledge of normal human structure and function at molecular, genetic, cellular, tissue, organ, system and whole-body levels in terms of growth, development, and health maintenance. Analyze the basic molecular and cellular mechanisms involved in the causation and treatment of human disease and their influence on clinical presentation and therapy.**
- 2. Collect, interpret, document, and communicate accurately a comprehensive medical history, including the psychological and behavioral factors, and a thorough organ-system-specific physical examination inclusive of the mental status of the patient.**
- 3. Integrate and communicate collected clinical information in the construction of appropriate diagnostic and therapeutic management strategies to identify life-threatening conditions ensuring prompt therapy, referral, and consultation with relevant disciplines and skillfully perform basic medical procedures for general practice on patients with common illness, acute and chronic, taking into account environmental, social, cultural and psychological factors.**
- 4. Demonstrate in-depth knowledge of the epidemiology and biostatistics of common diseases, and analyze the impact of ethnicity, culture, socioeconomic factors and other social factors on health, disease and individual patient's health care.**
- 5. Communicate effectively and professionally, both orally and in writing, with patients, their families, and with other healthcare providers utilizing information technology resources in his/her scholarly activities and professional development with the ability to teach others, and to understand and respect other healthcare professionals' roles, and apply the principles of multidisciplinary teamwork dynamics and collaboration.**
- 6. Apply scientific methods including evidence-based approach to the medical practice including problem identification, data collection, hypothesis formulation, etc., and apply inductive reasoning to problem solving and ensure that clinical reasoning and decision making are guided by sound ethical principles.**
- 7. Demonstrate knowledge of scientific research methods and ethical principles of clinical research and be able to write research proposals or research papers.**



8. Demonstrate professionally the skills needed for Quality improvement, lifelong learning, and continuous medical education including the ability to identify and address personal strength and weakness, self-assess knowledge and performance, and develop a self-improvement plan.

21. Intended Learning outcomes of the course (CLOs): Upon completion of the course, the student will be able to achieve the following intended learning outcomes:

1. List commonly used microscopes, histological techniques and stains.
2. Define the detailed structure of the cell organelles under electron microscope and label normal cell structure.
3. Appraise the organization of normal cells into tissues and relate their structure with their function.
4. Relate the structural and functional characteristics of each type of tissue that distinguish it from other tissue types.
5. Demonstrate critical thinking skills to predict possible pathologic outcomes of dysfunctional cells and tissues.
6. Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers and society.
7. Recognize and differentiate the type of tissue under light microscope using H&E stained slides and practice light microscope setup and use.

22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program):

Program ILOs / ILOs of the course	CLO (1)	CLO (2)	CLO (3)	CLO (4)	CLO (5)	CLO (6)	CLO (7)
PLO (1)	✓	✓	✓	✓	✓		
PLO (2)							
PLO (3)							
PLO (4)							
PLO (5)						✓	
PLO (6)							✓
PLO (7)							
PLO (8)							

23. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome (SLO)	Descriptors**	Learning Types (Face to Face/Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous Lecturing	Evaluation Methods	Learning Resources
1	1.1	Introduction to histology and Histological techniques	Define basophilia and acidophilia List the basic parts of the compound microscope, practice the proper care for and usage of each part. Understand the basic protocol for tissue processing Understand the different types of staining.	K K	Face to face		Synchronous Lecturing	Written exam	28. A
	1.2	Cell overview	Describe the detailed structure of the cell organelles under electron microscope Label normal cell structure	K K	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. A
2	2.1	Epithelium 1	List the principal functions of epithelial tissues and locate epithelia that derived from each embryonic germ layer Recall structural and functional characteristics of epithelial tissues that distinguish them from other tissue types	K K	Face to face		Synchronous Lecturing	Written exam	28. A
	2.2	Epithelium 2	Classify epithelia according to morphological criteria and Relate structure and function in epithelia	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. A
3	3.1	Epithelium 3	Locate different types of epithelial tissues, review cell junctions and apical modifications Identify the basal lamina in terms of its location, composition, and staining properties.	K K	Face to face		Synchronous Lecturing	Written exam	28. A
	3.2	Epithelium 4	Examine a set of microscopic slides for epithelium using light microscopic images/	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B



			virtual microscopy laboratory.						
4	4.1	Glands 1	Explain the criteria used for classification of the glands and distinguish between them. List examples of body's sites where each type can be found.	K K	Face to face		Synchronous Lecturing	Written exam	28. A
	4.2	Glands 2	Examine a set of microscopic slides for glands using light microscopic images/ virtual microscopy laboratory.	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B
5	5.1	Connective tissue 1	State the general functions of connective tissues and employ the basis of the morphological classification of connective tissues. State the names and properties of the principal fibers and cell types of connective tissues and Outline the role of the matrix in conferring differing properties of connective tissues.	K K	Face to face		Synchronous Lecturing	Written exam	28. A
	5.2	Connective tissue 2	Classify and locate different types of connective tissues	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. A
6	6.1	Connective tissue 3	Examine a set of microscopic slides for connective tissue using light microscopic images/ virtual microscopy laboratory.	S	Face to face		Synchronous Lecturing	Written exam	28. B
	6.2	Adipose tissue	Differentiate between brown and white adipose tissue in term of structure, location and function. Examine a set of microscopic slides for adipose tissue using light microscopic images/ virtual microscopy laboratory.	S S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. A, B
7	7.1	Cartilage 1	Differentiate cartilage tissue from other body tissues based on its morphological characteristics, function and location	S	Face to face		Synchronous Lecturing	Written exam	28. A



			Identify and differentiate the three types of cartilage and explain how their structures relate to their different properties and functions.	S					
			List examples of body's sites where each type of cartilage can be found	K					
			Describe the two types of cartilage growth and how it is nourished	K					
	7.2	Cartilage 2	Examine a set of microscopic slides for cartilage using light microscopic images/ virtual microscopy laboratory.	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B
8	Midterm exam								
9	9.1	Bone tissue 1	Recall structural and functional characteristics of bone tissue that distinguish it from other tissue types	K					
			Identify and differentiate between the compact bone and spongy bone.	K	Face to face		Synchronous Lecturing	Written exam	28. A
			List examples of body's bones where each type of bone can be found	K					
	9.2	Bone tissue 2	Differentiate between osteoblasts, osteocytes and osteoclasts.	S					
			Differentiate between woven and lamellar bone	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. A
10	10.1	Bone tissue 3	Express the similarities and differences between bone and cartilage, and how the properties of cartilage and bone differ from those of other connective tissues	S					
					Face to face		Synchronous Lecturing	Written exam	28. A
	10.2	Bone tissue 4	Examine a set of microscopic slides for bone using light microscopic images/ virtual microscopy laboratory.	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B
11	11.1	Bone ossification and remodeling	Describe the processes involved in two types of ossification (endochondral and intramembranous)	K					
			Recognize the zones of an epiphyseal plate and explain	S	Face to face		Synchronous Lecturing	Written exam	28. A



			how bone grows, and how and why it is remodeled.						
	11.2	Bone ossification and remodeling	Examine a set of microscopic slides for bone ossification using light microscopic images/ virtual microscopy laboratory.	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B
12	12.1	Muscle tissue 1	Identify the three types of muscle at the light and electron microscope levels, Recognize the distinctive features of skeletal muscle tissue. Describe the structural basis of muscle striation at the light microscope and EM levels and the molecular level.	S K K	Face to face		Synchronous Lecturing	Written exam	28. A
	12.2	Muscle tissue 2	Recognize the distinctive features of cardiac and smooth muscle tissue. Describe the structural basis of cardiac muscle striation at the light microscope and EM levels and the molecular level.	S K	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. A
13	13.1	Muscle tissue 3	Review the structural elements that harness muscle contraction (i.e., the shortening of myofibrils) to the movement of a body part (i.e., via connection to bone) as well as the mechanism by which muscle cells (skeletal, cardiac and smooth muscle) contract. Interpret the regenerative potential of each muscle type.	K S	Face to face		Synchronous Lecturing	Written exam	28. A
	13.2	Muscle tissue 4	Examine a set of microscopic slides for muscle tissue using light microscopic images/ virtual microscopy laboratory.	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B
14	14.1	Nervous tissue 1	Organize the nervous system into structural and functional divisions Compare sensory and motor functions. Distinguish between the somatic and autonomic nervous systems.	S S	Face to face		Synchronous Lecturing	Written exam	28. A



		Identify the cellular components of nervous tissue (neurons and neuroglia). Describe the structure of a neuron and differentiate between axon and dendrite. Describe the structural classification of neurons (multipolar, unipolar, bipolar and anaxonic).	K					
14.2	Nervous tissue 2	Examine a set of microscopic slides for nervous tissue using light microscopic images/ virtual microscopy laboratory.	S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28. B
** K: Knowledge, S: Skills, C: Competency								

24. Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Descriptors**	Period (Week)	Platform
Midterm exam	40	Introduction to histology and histological techniques/ Cell overview/ Epithelium/ Glands/ Connective tissue/ Adipose tissue/ Cartilage	1.1/ 1.2/ 2.1/ 2.2/ 3.1/ 3.2/ 4.1/ 4.2/ 5.1/ 5.2/ 6.1/ 6.2/ 7.1/ 7.2	K S	8 th week	computer-based exam
Final exam	60	Bone tissue/ Bone ossification and remodeling/ Muscle tissue/ Nervous tissue	9.1/ 9.2/ 10.1/ 10.2/ 11.1/ 11.2/ 12.1/ 12.2/ 13.1/ 13.2/ 14.1/ 14.2	K S C	15 th -16 th week	computer-based exam
** K: Knowledge, S: Skills, C: Competency						

25. Course Requirements

- ✓ Class room Lectures
- ✓ Internet connection
- ✓ Online educational material using Moodle platform (Electronic Videos and Activities)
- ✓ Histology Lab



26. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- ✓ Class room Lectures
- ✓ Interactive Videos and Animations
- ✓ Online activities and assignments
- ✓ Open Laboratory sessions
- ✓ Discussion sessions and forums
- ✓ Game- based learning

27. Course Policies:

A- Attendance policies:

Attendance will be monitored by the course coordinator. Attendance policies will be announced at the beginning of the course.

B- Absences from exams and handing in assignments on time:

Will be managed according to the University of Jordan regulations. Refer to <http://registration.ju.edu.jo/Documents/daleel.pdf>

C- Health and safety procedures:

Faculty Members and students must at all times, conform to Health and Safety rules and procedures.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this course and also integrity in your behavior in and out of the classroom. Students violate this policy would be subjected to disciplinary action according to University of Jordan disciplinary policies

E- Grading policy:

Grade-point average, Rules are preset by the Faculty and Department Councils

F- Available university services that support achievement in the course:

Availability of comfortable lecture halls, data show, internet service and E learning website <https://elearning.ju.edu.jo/> .

28. References:

A- Required book (s), assigned reading and audio-visuals:

Junqueira's Basic Histology, Text and Atlas, 15th edition, By Anthony L. Mescher

B- Recommended books, materials, and media:

Color Textbook of Histology, 4th edition, by [Leslie P. Gartner and James L. Hiatt](#).

Web based resources: <http://www.histologyguide.org/index.html>