COURSE PLAN

FIRST: BASIC INFORMATION

College

College	: College of Medicine
Department	: Basic Medical Sciences

Course

Course Title	: General Histology
Course Code	: 31502111
Credit Hours	: 2 Credit Hours (1 Theory + 1 Practical)
Prerequisite	: NA

Instructor

Name	: Dr. Ali Al Khader
Office No.	:
Tel (Ext)	: 3574
E-mail	: ali.alkhader@bau.edu.jo
Office Hours	:

Class Times

Building	Day	Start Time	End Time	Room No.
Lecture halls complex	Tuesday	12:00 13:00	13:00 14:00	
College of Medicine	S M T W T	8:00	11:00	Histology Lab

Text Book

Title: Junqueira's Basic Histology: Text and Atlas, by Anthony Mescher, latest edition.

References

- Wheater's Functional Histology: A Text and Colour Atlas, by Barbara Young, Phillip Woodford, & Geraldine O'Dowd, latest edition

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

This course covers the cell with respect to structure, function and classification, epithelial cells, cell structure of endocrine glands, peripheral blood, connective tissues, bone and cartilage, muscles, nerves, blood vessels, lymph reticular tissue, skin and appendages.

COURSE OBJECTIVES

By the end of the block the student should be able to:

- Identify the basic structure of the cell.

- Recognize the general organization of tissues at light microscopic level.
- Describe the microscopic structure of the basic tissues of the body.
- Discuss the functional significance of the tissue components.

COURSE LEARNING OUTCOMES

- Know the histological techniques to prepare and study the histological slides.
- Understand the histological structure of cell & basic tissues.
- Identify the cell components using light and electron microscopic images.
- Describe different types of basic tissues (epithelial, connective, muscular and nervous tissues).
- Describe special types of connective tissue (cartilage and bone).
- Recognize the normal histological structure of tissues in body organs under the light microcube.
- Acquire the necessary knowledge and skills to study the histopathological appearance of body tissues under different pathological conditions.

COURSE SYLLABUS

Week	Lecture	Session Objectives	Lab
Week 1	Histological Techniques and Microscopy	1. Describe the most common methods used for tissue preparation for microscopic examination. 2. Describe the principles of different types of microscopy. 3. Describe the most common techniques used to study tissue and cell, such as, autoradiography, cell and tissue cultures, cell fractioning, histochemistry and immunocytochemistry.	Lab Introduction and Instructions
Week 2	Eukaryotic Cell Components	1. Compare between the eukaryotic cells and prokaryotic cells. 2. Identify the main components of the eukaryotic cells: cell membrane, cytoplasm and nucleus. 3. Understand the structure of the cell (plasma) membrane. 4. Understand the structure of the different cytoplasmic organelles such as ribosomes, rough endoplasmic reticulum, smooth endoplasmic reticulum, mitochondria, Golgi apparatus, lysosomes, peroxisomes, cytoskeleton etc. 5. Understand the structure of the nucleus.	Light Microscope Usage
Week 3	Cell Division	1. Compare between mitosis and meiosis. 2. Describe the changes that occur during each of the phases of mitosis. 3. Describe the first and second meiotic divisions.	Cell Structure
Week 4	Extracellular Matrix and Cell Junctions	1. Describe the structure of extracellular matrix. 2. Describe the different types of fibers in the C.T. 3. Describe the structure of the basement membranes. 4. Describe cell junctions, such as; tight junctions, adhering junctions and gap junction, etc..	Cell Division
Week 5	Epithelial Tissue	1. Describe the general features of the epithelial tissue.	Revision

		2. Classify the epithelium into two main types: surface epithelium and glandular epithelium. 3. Describe the features of the different types of surface epithelium and identify their location. 4. Describe epithelial cells specializations such as cilia, microvilli and stereocilia and identify their location. 5. Describe the different types of glands and their locations.	
Week 6	Connective Tissue	1. Describe the general features of the C.T. 2. Describe the different cell types of the C.T. 3. Describe the structure and features of the different types of C.T such as Loose C.T., dense C.T., adipose tissue etc., and identify the location of each type.	Epithelial Tissue
Week 7	Cartilage and Bone	1. Describe the general structure and features of cartilage. 2. Describe the structure of each type of cartilage: hyaline, elastic and fibrous cartilages and identify the location of each type. 3. Describe the general structure and features of bone. 4. Describe the structure of compact and spongy bones and identify their location.	Connective Tissue
Week 8	**Midterm Exam**		
Week 9	Blood	1. Describe the general components of blood tissue. 2. Describe the histological features of bone marrow. 3. Compare the histological features of the different blood cells.	Cartilage and Bone
Week 10	Muscular Tissue	1. Describe the structure of the skeletal muscles and the sliding theory of muscle contraction. 2. Describe the structure of the cardiac muscles. 3. Describe the structure of the smooth muscles and identify their location. 4. Compare the structure of the three types of muscles: skeletal, cardiac and smooth.	Blood
Week 11	Nervous Tissue	1. Describe the general features of nerve tissue. 2. Describe the structure of neurons: cell body, dendrites, axons and synapses including motor and plates. 3. Classify the nerve cells into subtypes. 4. Describe the process of myelination. 5. Describe the different types of glia cells: astrocytes, oligodendrocytes, microglia, ependymal cells and Schwan cells. 6. Describe the spinal nerves connective tissue components.	Muscular Tissue
Week 12	Blood Vessels	1. Describe the general structure of blood vessels. 2. Describe the histological appearance of arteries and veins and their differences. 3. Describe the ultra-structural features of different types of capillaries.	Nervous Tissue
Week 13	Lymph Tissue	1. Describe the histological structure of lymph vessels. 2. Compare the structure of lymph vessels with blood vessels.	Revision

		3. Describe the histological structure of lymph nodes. 4. Describe the general histological features of lymphatic organs (thymus, spleen).	
Week 14	Skin and Body Membranes	1. Describe the histological organization of different body membranes. 2. Describe the general histological organization of skin. 3. Describe the cells and layers of epidermis. 4. Describe the histological structure of dermis.	Final Exam
Week 15 & 16	**Final Exam**		

COURSE LEARNING RESOURCES

- Lectures
- Practical Sessions
- Group discussions
- Reviews

ONLINE RESOURCES

https://www.anatomyatlases.org/MicroscopicAnatomy/MicroscopicAnatomy.shtml
http://www.kumc.edu/instruction/medicine/anatomy/histoweb/
http://www.meddean.luc.edu/lumen/MedEd/Histo/frames/histo_frames.html

ASSESSMANT TOOLS

ASSESSMENT TOOLS	**%**
Midterm Exam	
Theory	40
Practical	10
Final Exam	
Theory	35
Practical	15
TOTAL MARKS	100

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 15% will result in forfeiting the course and the student will not be permitted to attend the final examination.
Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records.

GRADING SYSTEM

A	4
A-	3.75
B+	3.5
B	3
B-	2.75
C+	2.5
C	2
C-	1.75
D+	1.5
D	1
D-	0.75
F	0.5

REMARKS

Attendance remarks:

- Attendance will be taken at the first ten minutes of the session (lecture or lab).
- Attendance for lectures will be taken according to seating numbers.
- Attendance for labs will be taken according to the group list.

Lab Remarks:

- Attend your assigned lab section.
- Wear your lab coat.
- Prepare yourself for the session and bring your atlas.

COURSE COORDINATOR

Course Coordinator: Dr. Ali Al Khader	**Department Head: Dr. Nabil Amer**
Signature:	**Signature:**
Date:	**Date:**