



## Course Syllabus of Histology

Faculty: Faculty of Medicine and Health Sciences.

Department: Health Sciences.

Program: Bachelor in Medical laboratory

I. General information about the course instructor :							
Name	Mogahid Yahya Nassar	Office Hours(3 Hours Weekly )					
Location & phone number	5202	Sat	Sun	Mon	Tue	Wed	Thu
Email	Mogahidnassar@yahoo.com				√		

II. General information about the course:						
1.	Course Title :	Histology.				
2.	Course Code and Number :	BML122				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2		1		3
4.	Study Level and Semester:	1 <sup>st</sup> year /2 <sup>nd</sup> semester				
5.	Pre-requisites :	BHS120				
6.	Co-requisites :	None				
7.	Program in which the course is offered:	Bachelor in Medical laboratory				
8.	Teaching Language:	English				
9.	Instruction location:	University of Science and Technology, Sana'a				

جامعة العلوم والتكنولوجيا  
إدارة ضمان الجودة والاعتماد  
مستند  
المراجع: 09/50  
د. اديب صالح



### III. Course Description

This introductory course which provide the student with the basic science literature of cell and tissues to identify the normal structure of human cell and its components and their function in the cell. This fundamental course will also help student to recognize the main characteristics of the human basic tissues (epithelium, connective, muscular and nervous tissues) and their appearance in different parts of human organs. The student will be able to differentiate between different types of tissues and organs under the light microscope during the laboratory sessions. The teaching strategies will include lectures, self-learning and assignment. The students will be evaluated through report, written exam and practical exam.

### IV. Course Aims: this course aims to:

1. Provide the students with basic knowledge about the structure of the human cells, tissues and the extracellular matrices surrounding them: epithelium, connective tissues, including blood, bone and cartilage, muscles, and nerves.
2. Learn the student the microscopic structure of the different human tissues.
3. Facilitate the integration of Histology with gross Anatomy, Physiology and Biochemistry.
4. Acquire student the skills of using the microscope and identifying the normal structures.

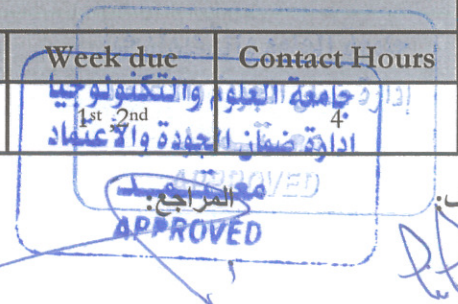
### V. Course Intended Learning Outcomes (CILOs) : by the end of this course, the student should be able to:

1. Describe the normal ultra-structure of the cell.
2. Describe the organization and components of the human body.
3. Correlate between the predominance of a cell organelle and the function of the cell.
4. Correlate between histological structure & function of different organs of all systems.
5. Use professionally the light microscope to obtain information from histological slides in the laboratory.
6. Identify and select various types of special stains for various tissues.
7. Work constructively in a group sharing his/her colleagues in the resources available.
8. Use the sources of biomedical information to remain current with advances in knowledge and practice.

### VI. Course Contents

#### Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	INTRODUCTION and CYTOPLASM	-Micro technique. -Microscopy.- L.M.& E.M.	1st 2nd 4 <sup>th</sup>	





		structure and function of cytoplasmic organelles. - Cytoplasmic inclusions.		
2	Nucleus	- General structure of the nucleus. - Molecular structure of D.N.A. - Chromosomes, genes and genome. - Nuclear function	3 <sup>rd</sup>	2
3	EPITHELIUM	- General characters of epithelial cells. - Classification of epithelium. - Epithelium covering surfaces and lining cavities. - Glandular epithelium. - Neuroepithelium. - Germinal epithelium.	4 <sup>th</sup> , 5 <sup>th</sup>	4
4	BLOOD	- The characters, function and morphology of R.B.Cs., leucocytes & platelets.	6 <sup>th</sup> , 7 <sup>th</sup>	4
5	Mid exam		8 <sup>th</sup>	
6	CONNECTIVE TISSUE PROPER	-General structure of connective tissue. - Free and fixed connective tissue cells. - Connective tissue fibers - Connective tissue matrix. - Different types of C.T.	9 <sup>th</sup> , 10 <sup>th</sup>	4
7	CARTILAGE	- General structure of cartilage. - Types of cartilage.	11 <sup>th</sup>	2
8	BONE	- General structure of bone. - Types of bone.	12 <sup>th</sup>	2
9	MUSCULAR TISSUE	- General characters of muscular tissue. - Types of muscles.	13 <sup>th</sup>	2
10	NERVOUS TISSUE	- General structure of nerve cell. - Types of nerve cells. - Synapses. - Nerve endings.	14 <sup>th</sup> , 15 <sup>th</sup>	4
11	Final exam		16	2
Total number of weeks and hours			16	32

### Second: Practical/Tutorial/Clinical aspects

No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
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مستعمل المراجع:  
APPROVED  
الموصف:

1.	<b>INTRODUCTION</b> -Micro technique. -Microscopy. -Liver cell, nucleus and cytoplasm.	2nd	2
2.	<b>CELL ORGANELLES</b> - R.E.R. in pancreatic acinar cells. - S.E.R. in lacrimal acinar cells. - Nissl granules in nerve cells by T.B. - Mitochondria in liver cells by iron Hx. - Golgi bodies in the epididymis by silver stain.	3rd	2
3.	<b>BLOOD</b> -Blood film. -Bone marrow section.	4th	2
4.	<b>SIMPLE EPITHELIUM</b> -Simple squamous epithelium in the parietal layer of Bowman's capsule of the kidney. -Simple cubical epithelium in the renal tubules. -Simple columnar epithelium in the small intestine. -Pseudostratified columnar epithelium with goblet cells in the trachea. <b>NEUROEPITHELIUM</b> -Taste buds in the tongue.	5th	2
5.	<b>STRATIFIED EPITHELIUM</b> -keratinized stratified squamous epithelium in the skin. -Non keratinized stratified squamous epithelium in the vagina. - Stratified cuboidal epithelium in the gland duct. - Stratified columnar epithelium in the gland duct. -Transitional epithelium in the urinary bladder. <b>GLANDULAR EPITHELIUM</b> -Mucous glands in the oesophagus. -Serous glands in the pancreas. -Mixed glands in the salivary glands.	6th	2
6.	<b>CONNECTIVE TISSUE PROPER</b> - Loose connective tissue by spreading technique. -Regular dense white C.T. in tendon. -Regular dense yellow C.T. in ligament by orcein stain. -Irregular dense yellow C.T. in aorta by orcein stain.	7th	2
7.	<b>CONNECTIVE TISSUE OF SPECIAL PROPERTIES</b> -Mucoid C.T. in umbilical cord. - Adipose C.T. -Reticular C.T.	8th	2
8.	<b>CARTILAGE</b> -Hyaline cartilage in the costal cartilage. -Elastic cartilage in ear pinna by orcein stain. - White fibrocartilage.	9th	2



9.	<b>BONE</b> -Compact bone. -Cancellous bone. -Intracartilagenous ossification.	10th	2
10.	<b>MUSCULAR TISSUE</b> -Skeletal muscles. -Cardiac muscles. -Smooth muscles.	11th	2
11.	<b>NERVOUS TISSUE</b> -Nerve trunk,Hx&E. -Nerve trunk,osmic acid. -spinal ganglia Hx&E. -Spinal ganglia,silver stain. -Sympathetic ganglia.	12th	2
12.	<b>Final practical exam</b>	13 <sup>th</sup>	2
<b>Total number of weeks and hours</b>		12	24