

Republic of Yemen
Ministry of Higher Education & Scientific Research
21 SEPTEMBER UNIVERSITY for MEDICALS and APPLIED
SCIENCES

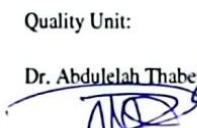


Bachelor of Clinical Pharmacy & Pharm. D.

Course Specification of Histology

Course No. (01.01.202)

2022

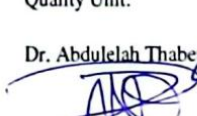
Prepared by:  Prof. Salim Al-Riyashi	Reviewed by:  Dr. Gamil Abdul Mughni	Head of the Department:  Dr. Abdulrahman Thabet	Quality Unit:  Dr. Ali Alyahawi	Dean: 
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I. Course Identification and General Information:

1	Course Title:	Histology			
2	Course Code & Number:	01.01.202			
3	Credit Hours:	Theory Hours			
		Lecture	Exercise	Practical	Credit Hours
		2	0	2	3
4	Study Level/ Semester at which this Course is offered:	1 st Level / 2 nd Semester			
5	Pre –Requisite (if any):				
6	Co –Requisite (if any):				
7	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.			
8	Language of Teaching the Course:	English			
9	Study System:	semester			
10	Mode of Delivery:	Regular			
11	Location of Teaching the Course:	Faculty of Clinical Pharmacy			
12	Prepared by:	Dr. Aref Saleh Mohammed Abdulmughni			
13	Date of Approval:	2023			

II. Course Description:

The course describes the basic knowledge of the structure, function, and organization of the cells, tissues, and organs of the human body.

Prepared by:  Prof. Salim A. Riyashi	Reviewed by:  Dr. Gamil Abdul Mughni	Head of the Department:  Dr. Abdulrahman Thabet	Quality Unit:  Dr. Ali Alyahawi	Dean: 
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III. Alignment Course Intended Learning Outcomes with program outcomes

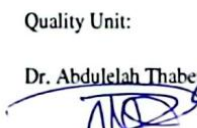
III. Course Intended Learning Outcomes (CILOs)		Referenced PILOs
4A. Knowledge and Understanding: <i>Upon successful completion of the course, students will be able to:</i>		
a1	Recognize the basic knowledge of the structure, function, and organization of the cells, tissues, and organs of the human body.	A1
a2	Name the specific type of tissues and cells and List and label the specific location of cells, tissue types in the body.	A1
a3	Describe the functional capabilities of each tissue type and relate them to the structure and Justify the cells, tissues and organs, their functions and the major components	A1
B. Intellectual Skills: <i>Upon successful completion of the course, students will be able to:</i>		
b1	Perform microscopic examination of cells, tissues and body organs.	B1
C. Professional and Practical Skills: <i>Upon successful completion of the course, students will be able to:</i>		
c1	Recognize and differentiate between types of cells and tissues in histological slides.	C1
c2	Draw and label histological slides seen during the course.	C1
D. Transferable Skills: <i>Upon successful completion of the course, students will be able to:</i>		
d1		

IV. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods :

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	Recognize the basic knowledge of the structure, function, and organization of the cells, tissues, and organs of the human body.	Lectures	Exams
a2	Name the specific type of tissues and cells and List and label the specific location of cells, tissue types in the body..	Lectures	Exams
a3	Describe the functional capabilities of each tissue type and relate them to the structure and Justify the cells, tissues and organs, their functions and the major components	Lectures	Exams

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

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	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1	Perform microscopic examination of cells, tissues and body organs.	Lectures, Laboratory practical,	Home work exams
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	Demonstrate the structural features and different tissue elements of each organ under the microscope.	Laboratory practical	Practical exam
c2	Draw and label histological slides seen during the course.	Laboratory practical	Practical exam
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies

V. Course Content:

A – Theoretical Aspect:

NO.	Units/Topics List	Number of Weeks	Contact hours	Learning Outcomes (CILOs)
1	Introduction, Micro-techniques, and staining	1	2	b1,a1,c1
2	Cytology: cell membrane. Cytology (cell organoids, cytoskeleton, cell inclusion). Nucleus (DNA, chromatin, Chromosomes, Chromosomal abnormality).	1	2	a1, b1,a3
3	Epithelium (surface epithelium, glandular epithelium, cell junctions). Connective tissue (CT) general characters, and CT fibers. Connective tissues cells, CT proper.	1	2	a2, a3,b1
4	Cartilage; Cartilage cells, types of cartilage. Bone; bone cells, types of bone, bone healing.	1	2	a3, c1,b1
5	Blood; blood plasma, blood cells, bone marrow, hematopoiesis.	1	2	a2, a1,a3
6	Muscular tissue; structure of muscle cell fibers, types of muscles.	1	2	a2, b1, c1,a1
7	(skeletal muscles, cardiac muscle, smooth muscles).	1	2	a2, b1, c1,a1
8	MED TERM	1	2	a2, , b1, c1
9	Nervous tissue; brain, spinal cord, structure and types of nerve cells, types of nerve fibers, nerve ganglion, injury and healing of	1	2	a3, b1, c1

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Dean

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	nerve cells).				
10	Vascular system: arteries, veins, blood capillaries, blood sinusoids.	1	2	a1, b1, c1	
11	Lymphatic system: immunity, lymph nodes, spleen, thymus gland.	1	2	a3, b1, c1	
12	Respiratory system: nasal cavity, trachea, bronchial tree, lung.	1	2	a2, a3, b1	
13	Digestive system: oral cavity, gastro-intestinal tube, liver, pancreas.	1	2	a2, b1, c1	
14	Urinary system: kidney, urinary tract.	1	2	a1, b1, c1	
15	Reproductive system: male and female reproductive organs; such as testis, ovary, uterus.	1	2	a3, b1, c1	
16	Final exam	1	2	a2, b1, c1, a1, a3, c1	
	Total	16	32		

B - Practical Aspect: (if any)

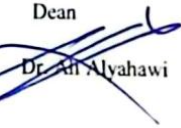
Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Introduction (lab sessions instructions , dealing with microscope,) Epithelium (types and location of simple epithelia)	1	2	c1
2	Epithelium (types and location of stratified epithelia) "Connective Tissue.(connective tissue proper , cartilage, Blood, Lymphatic vessels and bone)"	1	2	c2, c1
3	Nervous tissue Cardiac muscle	1	2	c2
4	Skeletal and smooth muscle Tongue and salivary gland	1	2	c2
5	Thyroid gland Esophagous and stomach			c1, c2
6	Small intestine Large intestine	1	2	c1, c2
7	Liver and pancreas Gall bladder	1	2	c2
8	- Ureters - Bladder	1	2	c1, c2
9	Male reproductive system- testis	1	2	c1, c2
10	Female reproductive system-ovary Female reproductive system-uterus	1	2	c1, c2
11	Breast	1	2	c1
12	-Respiratory Tract- trachea -Lung	1	2	c2

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13	Skin	1	2	c2,d1
14	Lymph nodes Spleen	1	2	c2,d1
15	Final exam	1	2	c1, c2
Number of Weeks /and Units Per Semester		15	30	

V. Teaching Strategies of the Course:

1-	Lectures
2-	practical session
3-	Seminars

VI. Assessment Methods of the Course:

No	Assignment
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)
3	Practical Exams (PE)

VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Midterm Exam	8	20	20%	a1,a2,b1,d1 ,c1
2	Practical exam	14	30	30%	a1,a2,b1,c1,d1
3	Final Exam	16	50	50%	a1,a2,b1,c1,d1
	Total		100	100%	

X. Learning Resources:

1- Required Textbook(s)

- 1- **Course notes** : Handouts of lectures (either soft or hard copies)
- 2- **Text book**
-Atlas of Histology with functional correlation. Di Fiore's International Edition 9th (2000).
-Textbook of Human Histology (4th Edition) Inderbir Singh Jaypee Brother, 2002

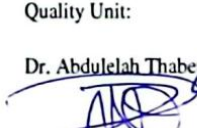
2- Essential References.

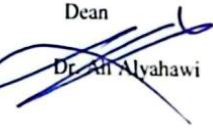
- 1- Basic histology, Junqueira, L.C.12th ed. 2015
- 2- Atlas of histology: Di Fiore, 2015

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Functional Histology (Wheater's) Text & Atlas of Histology, 2014

3- Electronic Materials and Web Sites etc.

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|----|--|
| 1- | British journal of anatomy |
| 2- | Journal of clinical anatomy |
| 3- | www.innerbody.com |
| 4- | www.instantanatomy.net |

X. Course Policies: (Based on the Uniform Students' By law (2007))

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
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7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

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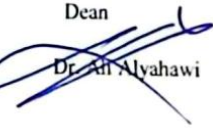
Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Plan (Syllabus) of **Histology** Course Code. (01.01.202)

I. Information about Faculty Member Responsible for the Course:								
Name of Faculty Member:	Dr. Aref Saleh Mohammed Abdulmughni		Office Hours					
Location& Telephone No.:								
E-mail:			SAT	SUN	MON	TUE	WED	THU

2022- 2023

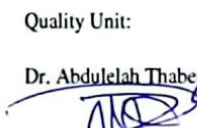
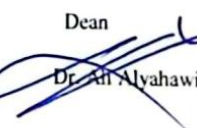
Prepared By:  Prof. Salim Al-Riyashi	Reviewed by:  Dr Gamil Abdul Mughni	Head of the Department:	Quality Unit:  Dr. Abdulah Thabet	Dean:  Dr. Ali Alyahawi
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I. Course Identification and General Information:

1	Course Title:	Histology			
2	Course Code & Number:	01.01.202			
3	Credit Hours:	Theory Hours			
		Lecture	Exercise	Practical	Credit Hours
		2	0	2	3
4	Study Level/ Semester at which this Course is offered:	1 st Level / 2 nd Semester			
5	Pre –Requisite (if any):				
6	Co –Requisite (if any):				
7	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.			
8	Language of Teaching the Course:	English			
9	Study System:	semester			
10	Mode of Delivery:	Regular			
11	Location of Teaching the Course:	Faculty of Clinical Pharmacy			
12	Prepared by:	Dr. Aref Saleh Mohammed Abdulmughni			
13	Date of Approval:	2023			

II. Course Description:

The course describes the basic knowledge of the structure, function, and organization of the cells, tissues, and organs of the human body.

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III. Alignment Course Intended Learning Outcomes with program outcomes

III. Course Intended Learning Outcomes (CILOs)

4A. Knowledge and Understanding:

Upon successful completion of the course, students will be able to:

a1	Recognize the basic knowledge of the structure, function, and organization of the cells, tissues, and organs of the human body.
a2	Name the specific type of tissues and cells and List and label the specific location of cells, tissue types in the body..
a3	Describe the functional capabilities of each tissue type and relate them to the structure and Justify the cells, tissues and organs, their functions and the major components

B. Intellectual Skills:

Upon successful completion of the course, students will be able to:

b1	Perform microscopic examination of cells, tissues and body organs.
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C. Professional and Practical Skills:

Upon successful completion of the course, students will be able to:

c1	Recognize and differentiate between types of cells and tissues in histological slides.
c2	Draw and label histological slides seen during the course.

D. Transferable Skills:

Upon successful completion of the course, students will be able to:

d1		
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IV. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods :

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	Recognize the basic knowledge of the structure, function, and organization of the cells, tissues, and organs of the human body.	Lectures	Exams
a2	Name the specific type of tissues and cells and List and label the specific location of cells, tissue types in the body..	Lectures	Exams
a3	Describe the functional capabilities of each tissue type and relate them to the structure and Justify the cells, tissues and organs, their functions and the major components	Lectures	Exams

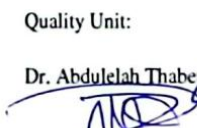
(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
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b1	Perform microscopic examination of cells, tissues and body organs.	Lectures, Laboratory practical,	Home work exams
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	Demonstrate the structural features and different tissue elements of each organ under the microscope.	Laboratory practical	Practical exam
c2	Draw and label histological slides seen during the course.	Laboratory practical	Practical exam
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies

V. Course Content:

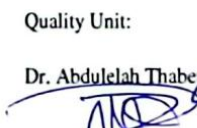
A – Theoretical Aspect:

NO.	Units/Topics List	Number of Weeks	contact hours		
1	Introduction, Micro-techniques, and staining	1	2		
2	Cytology: cell membrane. Cytology (cell organoids, cytoskeleton, cell inclusion). Nucleus (DNA, chromatin, Chromosomes, Chromosomal abnormality).	1	2		
3	Epithelium (surface epithelium, glandular epithelium, cell junctions). Connective tissue (CT) general characters, and CT fibers. Connective tissues cells, CT proper.	1	2		
4	Cartilage; Cartilage cells, types of cartilage. Bone; bone cells, types of bone, bone healing.	1	2		
5	Blood; blood plasma, blood cells, bone marrow, hematopoiesis.	1	2		
6	Muscular tissue; structure of muscle cell fibers, types of muscles.	1	2		
7	(skeletal muscles, cardiac muscle, smooth muscles).	1	2		
8	MED TERM	1	2		
9	Nervous tissue; brain, spinal cord, structure and types of nerve cells, types of nerve fibers, nerve ganglion, injury and healing of nerve cells).	1	2		
10	Vascular system: arteries, veins, blood capillaries, blood sinusoids.	1	2		
11	Lymphatic system: immunity, lymph nodes, spleen, thymus gland.	1	2		

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12	Respiratory system: nasal cavity, trachea, bronchial tree, lung.	1	2	
13	Digestive system: oral cavity, gastro-intestinal tube, liver, pancreas.	1	2	
14	Urinary system: kidney, urinary tract.	1	2	
15	Reproductive system: male and female reproductive organs; such as testis, ovary, uterus.	1	2	
16	Final exam	1	2	
	Total	16	32	

B - Practical Aspect: (if any)

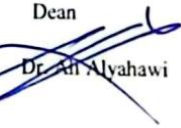
Order	Tasks/ Experiments	Number of Weeks	contact hours
1	Introduction (lab sessions instructions , dealing with microscope,) Epithelium (types and location of simple epithelia)	1	2
2	Epithelium (types and location of stratified epithelia) "Connective Tissue.(connective tissue proper , cartilage, Blood, Lymphatic vessels and bone)"	1	2
3	Nervous tissue Cardiac muscle	1	2
4	Skeletal and smooth muscle Tongue and salivary gland	1	2
5	Thyroid gland Esophagous and stomach		
6	Small intestine Large intestine	1	2
7	Liver and pancreas Gall bladder	1	2
8	- Ureters - Bladder	1	2
9	Male reproductive system- testis	1	2
10	Female reproductive system-ovary Female reproductive system-uterus	1	2
11	Breast	1	2
12	Respiratory Tract- trachea Lung	1	2
13	Skin	1	2
14	Lymph nodes Spleen	1	2

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Quality Unit: 
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Dean: 
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15	Final exam	1	2
Number of Weeks /and Units Per Semester		15	30

VI. Assessment Methods of the Course:

No	Assignment
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)
3	Practical Exams (PE)

VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	
1	Midterm Exam	8	20	20%	
2	Practical exam	14	30	30%	
3	Final Exam	16	50	50%	
	Total		100	100%	

X. Learning Resources:

1- Required Textbook(s)

1-	Course notes : Hand outs of lectures (either soft or hard copies)
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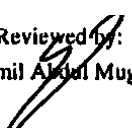
2- Essential References.

1-	Basic histology, Junqueira, L.C.12 th ed. 2015
2-	Atlas of histology: Di Fiore, 2015 Functional Histology (Wheater's) Text & Atlas of Histology, 2014

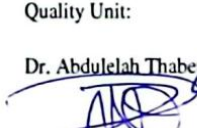
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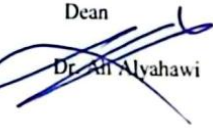
1-	British journal of anatomy
2-	Journal of clinical anatomy
3-	www.innerbody.com
4-	www.instantanatomy.net

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Reviewed by: 
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Quality Unit: 
Dr. Abdulrahman Thabet

Dean: 
Dr. Ali Alyahawi

X. Course Policies: (Based on the Uniform Students' By law (2007))

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
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