



Unit Description Form

Course Description Form

Faculty of Engineering / Department of



Unit Information

Course Information

Unit Title	Histology	Unit delivery	
Unit Type	Core	☒ نظريه ☒ حاضر ☒ المختبر ☐ تعليمي ☐ عملي ☐ Seminar	
Unit Code	BME-316		
ECTS Credits	8		
SWL (ساعة / SEM)	125		
Unit level	3		
Department of Administration	Biomedical Engineering	College	College of Engineering
Unit Commander	Kawthar Ali Hasan	E-mail Address	Kawthar.ali@uowa.edu.iq
Title of Unit Commander	Assist-Lecture	Unit Commander Qualifications	Doctor
Unit Teacher		E-mail Address	
Peer Reviewer Name	Name	E-mail Address	
Date of accreditation of the Scientific Committee	26/9/2024	Version number	1.0

Relationship with other units

Relationship with other subjects

Prerequisites Unit	No	Semester	
Common Requirements Unit	No	Semester	

Unit objectives, learning outcomes and how-to contents Course objectives, learning outcomes and instructional contents	
Objectives of the Unit Course Objectives	The course aims to enable students to acquire the following skills: • Identify the different types of tissues in the body, such as epithelial, muscular, nervous, and connective tissues. • Enable students to gain general knowledge about tissues. • Understand the characteristics of tissues and the damage that may occur in them. • Learn about specialized types of tissues. • Recognize histological stains and their use in preparations and early detection of some diseases. • Understand the relationship between histology and physiology.
Unit Learning Outcomes Learning outcomes of the course	1. Training the student on the purposeful engineering mindset 2. Make the student able to distinguish between engineering materials and their uses. 3. Applying theoretical concepts through conducting practical experiments on the properties of matter. 4. Recognize and understand how to choose the right material in the right place. The ability to analyze and discover the problem or error and the ability to find a solution to the error.
Indicative Contents Indicative Contents	Introduction to Tissues: Defining the types of tissues and their basic functions. • Epithelial Tissues: Study of tissues that cover the internal and external surfaces of the body, such as the skin and intestines. • Muscle Tissues: Study of tissues responsible for movement, including skeletal, cardiac, and smooth muscles. • Nervous Tissues: Study of tissues that handle nerve signals, such as nerves and the brain. • Connective Tissues: Study of tissues that support and connect other tissues, such as tendons and cartilage. • Specialized Tissues: Such as blood, bone, and glandular tissues. • Pathological Changes in Tissues: Study of how tissues change due to diseases or injuries.

Learning and Teaching Strategies Learning and Teaching Strategies	
Strategies	1. Using the Smart Board and Illustrative Images Whenever Possible. 2. Using the Light Microscope at Different Magnifications with Objective and Eyepiece Lenses.

Student Workload (SWL)			
The student's academic load is calculated for 15 weeks			
SWL منظم (h / sem) Regular academic load of the student during the semester	64	SWL regulator(h/s) Regular student load per week	4
SWL غير منظم (h / sem) Irregular academic load of the student during the semester	61	Unregulated SWL (h/s) Irregular student academic load per week	4
إجمالي SWL (h / sem) The student's total academic load during the semester	125		

Unit Evaluation Course Evaluation					
As		Time/Number	Weight (tags)	Week due	Related learning outcomes
Formative Assessment	Contests	2	10% (10)	5, 10	2&1
	Assignments	2	10% (10)	2, 12	2&1
	Projects /Laboratory.	1	10% (10)	continuous	2&1
	report	1	10% (10)	13	
Final Assessment	Midterm Exam	2 hr	10% (10)	7	2&1
	Final Exam	2 hours	50% (50)	16	every
Overall Rating			100% (100 degree)		

Delivery Plan (Weekly Curriculum) Theoretical Weekly Curriculum	
week	Covered Material
Week 2+1	General Introduction: History of histology, review of cell components, and the concept of tissue.
Week 3	Epithelial Tissue: Characteristics of epithelial tissues, their functions, classification, and information about pseudostratified and transitional epithelium.
Week 4	Connective Tissue: Introduction to connective tissue, its functions, components, and ground substance
Week 5	Connective Tissue: Collagen fibers, elastic fibers, and reticular fibers.
Week 6	Bone Tissue: Components of bone, its functions, bone cells, types of bone tissue, and bone diseases
Week 7	Blood: Components and functions of blood, blood cells and plasma, and common blood disorders.
Week8	Cartilage: Histological structure of cartilage, cartilage cells, and functions of cartilage
Week 9	Types of Cartilage: Hyaline, elastic, and fibrocartilage.
Week 10	Nervous Tissue: Its types and characteristics, distribution in the body, and functions
Week 11	Muscle Tissue: Its types, characteristics, distribution in the body, and functions.
Week 12	Heart and Smooth Muscles

Week 13	Lymphatic System: Histological structure of some organs and its adaptation to function.
Week 14	Study of the Compound Light Microscope: Learning about the types of light microscopes and the cameras used for tissue imaging
Week 15	Exams

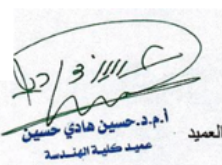
Learning and Teaching Resources		
Learning and Teaching Resources		
	text	Available in the library?
Required texts	Junqueira's- basic – histology and cell biology Text book of veterinary histology by Samuelson 2010	Yes
Recommended texts	General Histology Books	Yes
Websites	http://www.iasj.net الاكاديميه العلميه المجلات	

Grading chart				
Grading chart				
group	degree	Appreciation	Tags (%)	definition
An-Najah Group (50 - 100)	A - Excellent	privilege	90 - 100	Outstanding Performance
	B - Very Good	Very good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Proper work with noticeable errors
	D - Satisfactory	medium	60 - 69	Fair but with significant shortcomings
	E - sufficient	Acceptable	50 - 59	The work meets the minimum standards
Group failure (0 – 49)	FX - Failed	Deposit (in processing)	(45-49)	More work required but credit granted
	F - Failed	Failure	(0-44)	Large amount of work required

Note: Signs that are more than 0.5 decimal places greater than or below the full mark will be rounded higher or lower (for example, a score of 54.5 will be rounded to 55, while a mark of 54.4 will be rounded to 54. The university has a policy of not tolerating "imminent traffic failure", so the only modification to the marks granted by the original mark(s) will be the automatic rounding described above.



Head of the Department:
Dr. Osama Abdulbari



د. Osama Abdulbari
عميد كلية الهندسة



Assist. Lec: Kawthar Ali