



# Unit Description Form

## Course Description Form

### Faculty of Engineering / Department of



#### Unit Information

##### Course Information

Unit Title	Histology			Unit delivery
Unit Type	Core			<input checked="" type="checkbox"/> نظريه <input checked="" type="checkbox"/> حاضر <input checked="" type="checkbox"/> المختبر <input type="checkbox"/> تعليمي <input type="checkbox"/> عملي <input type="checkbox"/> Seminar
Unit Code	BME-316			
ECTS Credits	8			
SWL (ساعه / SEM)	125			
Unit level	3	Delivery Semester	1	
Department of Administration	Biomedical Engineering	College	College of Engineering	
Unit Commander	Kawthar Ali Hasan	E-mail Address	<a href="mailto:Kawthar.ali@uowa.edu.ig">Kawthar.ali@uowa.edu.ig</a>	
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

<b>Objectives of the Unit</b> Course Objectives	<p>The course aims to enable students to acquire the following skills:</p> <ul style="list-style-type: none"> <li>• Identify the different types of tissues in the body, such as epithelial, muscular, nervous, and connective tissues.</li> <li>• Enable students to gain general knowledge about tissues.</li> <li>• Understand the characteristics of tissues and the damage that may occur in them.</li> <li>• Learn about specialized types of tissues.</li> <li>• Recognize histological stains and their use in preparations and early detection of some diseases.</li> <li>• Understand the relationship between histology and physiology.</li> </ul>
<b>Unit Learning Outcomes</b>  Learning outcomes of the course	<ol style="list-style-type: none"> <li>1. Training the student on the purposeful engineering mindset</li> <li>2. Make the student able to distinguish between engineering materials and their uses.</li> <li>3. Applying theoretical concepts through conducting practical experiments on the properties of matter.</li> <li>4. Recognize and understand how to choose the right material in the right place.</li> </ol> <p>The ability to analyze and discover the problem or error and the ability to find a solution to the error.</p>
<b>Indicative Contents</b>  Indicative Contents	<p>Introduction to Tissues: Defining the types of tissues and their basic functions.</p> <ul style="list-style-type: none"> <li>• Epithelial Tissues: Study of tissues that cover the internal and external surfaces of the body, such as the skin and intestines.</li> <li>• Muscle Tissues: Study of tissues responsible for movement, including skeletal, cardiac, and smooth muscles.</li> <li>• Nervous Tissues: Study of tissues that handle nerve signals, such as nerves and the brain.</li> <li>• Connective Tissues: Study of tissues that support and connect other tissues, such as tendons and cartilage.</li> <li>• Specialized Tissues: Such as blood, bone, and glandular tissues.</li> <li>• Pathological Changes in Tissues: Study of how tissues change due to diseases or injuries.</li> </ul>

## Learning and Teaching Strategies

### Learning and Teaching Strategies

<b>Strategies</b>	<ol style="list-style-type: none"> <li>1. Using the Smart Board and Illustrative Images Whenever Possible.</li> <li>2. Using the Light Microscope at Different Magnifications with Objective and Eyepiece Lenses.</li> </ol>
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## Student Workload (SWL)

The student's academic load is calculated for 15 weeks

<b>SWL منظم (h / sem)</b> Regular academic load of the student during the semester	64	<b>SWL regulator(h/s)</b> Regular student load per week	4
<b>SWL غير منظم (h / sem)</b> Irregular academic load of the student during the semester	61	<b>Unregulated SWL (h/s)</b> Irregular student academic load per week	4
<b>إجمالي SWL (h / sem)</b> 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	<b>Contests</b>	2	10% (10)	5, 10	2&1
	<b>Assignments</b>	2	10% (10)	2, 12	2&1
	<b>Projects /Laboratory.</b>	1	10% (10)	continuous	2&1
	<b>report</b>	1	10% (10)	13	
Final Assessment	<b>Midterm Exam</b>	2 hr	10% (10)	7	2&1
	<b>Final Exam</b>	2 hours	50% (50)	16	every
<b>Overall Rating</b>		100% (100 degree)			

## Delivery Plan (Weekly Curriculum)

### Theoretical Weekly Curriculum

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

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

<b>Learning and Teaching Resources</b>		
<b>Learning and Teaching Resources</b>		
	<b>text</b>	<b>Available in the library?</b>
<b>Required texts</b>	Junqueiras- basic – histology and cell biology Text book of veterinary histology by samuelson 2010	Yes
<b>Recommended texts</b>	General Histology Books	Yes
<b>Websites</b>	الاکاديمیه العلمیه المجلات <a href="http://www.iasj.net">http://www.iasj.net</a>	

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