



# Unit Description Form

## Course Description Form

### Faculty of Engineering / Department of



#### Unit Information

#### Course Information

<b>Unit Title</b>	Histology		<b>Unit delivery</b>	
<b>Unit Type</b>	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	
<b>Unit Code</b>	BME-316			
<b>ECTS Credits</b>	8			
<b>SWL (ساعة / SEM)</b>	125			
<b>Unit level</b>	3	<b>Delivery Semester</b>		
<b>Department of Administration</b>	Biomedical Engineering	<b>College</b>	College of Engineering	
<b>Unit Commander</b>	Kawthar Ali Hasan	<b>E-mail Address</b>	<a href="mailto:Kawthar.ali@uowa.edu.iq">Kawthar.ali@uowa.edu.iq</a>	
<b>Title of Unit Commander</b>	Assist-Lecture	<b>Unit Commander Qualifications</b>	Doctor	
<b>Unit Teacher</b>		<b>E-mail Address</b>		
<b>Peer Reviewer Name</b>	Name	<b>E-mail Address</b>		
<b>Date of accreditation of the Scientific Committee</b>	26/9/2024	<b>Version number</b>	1.0	

#### Relationship with other units

#### Relationship with other subjects

<b>Prerequisites Unit</b>	No	<b>Semester</b>	
<b>Common Requirements Unit</b>	No	<b>Semester</b>	

**Unit objectives, learning outcomes and how-to contents**  
**Course objectives, learning outcomes and instructional contents**

<p><b>Objectives of the Unit</b> Course Objectives</p>	<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>
<p><b>Unit Learning Outcomes</b> Learning outcomes of the course</p>	<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>
<p><b>Indicative Contents</b> Indicative Contents</p>	<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**

<p><b>Strategies</b></p>	<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

		Time/Number	Weight (tags)	Week due	Related learning outcomes
<b>Formative Assessment</b>	<b>As</b>				
	<b>Contests</b>	2	10% (10)	5, 10	2&1
	<b>Assignments</b>	2	10% (10)	2, 12	2&1
	<b>Projects /Laboratory report</b>	1	10% (10)	continuous	2&1
<b>Final Assessment</b>	<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>		
Learning and Teaching Resources		
	text	Available in the library?
<b>Required texts</b>	Junqueira's- 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>	<a href="http://www.iasj.net">http://www.iasj.net</a> الاكاديميه العلميه المجالات	

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