

## Course Description Template for the subject | Pathology

University/College Name	AUIQ/ College of Medicine
Subject Name	Pathology
Academic Stage	<b>Third</b> Stage
Available Attendance Modes	Lecture and Discussion
Subject System	Yearly
Academic Year for Preparing this Description"	2023-2022

### Pathology and Fornsic

**المقدمة :** وهو من الفروع الاساسية في كلية الطب تم افتتاحها في عام 2005 ويدرس فيه علم الامراض والطب العدلي لطلبة المرحتين الثالثة والرابعة.  
**أهداف المادة العلمية لعلم الامراض:-**

في نهاية المرحلة الدراسية الثالثة نتوقع من الطالب ان يكون قادرا على ان:

1. فهم التغيرات المرضية
2. فهم علاقه بين الحالة السريرييه والتغيرات المرضية
3. قادر على البحث في المادة العلمية في علم الامراض
4. الربط بين وظائف الاعضاء والتغيرات المرضية.
5. الاطلاع الكافي على الاطلس المصور للتغيرات المرضية
6. الحضور في مختبر المستشفى التعليمي والاطلاع على الممارسة العملية في هذا الاختصاص
7. دراسة الشرائح المجهرية والعينات الكبيرة
8. تحفيز الطالب على الرغبة بمتابعة الدراسة والتخصص مستقبلا في هذا الاختصاص

عدد الوحدات	الفصل الثاني	الفصل الأول	الساعات المنهجية
12	60 ساعة	60 ساعة	الساعات النظرية
	60 ساعة	60 ساعة	الساعات العملية

### ***Textbooks approved;***

- Robbins Basic pathology 8<sup>th</sup> ed.
- Steven's Core pathology 3ed ed. 2009

***Teaching methods(overview student centered learning lectures site visit practical);***

### **Assessment;**

summative and formative  
assessmen

written

project

written exam midyear=25 degrees,final exam=45 degrees,practical exam=15 degrees,quizzes=20 degrees

No	Title of lectures and educational objectives	hours
1	Introduction	1
Week1	<b>Cellular injury and adaptation</b> <u>, In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ Definition &amp; classification of injurious agents</li> <li>❖ Mechanism of cell injury:- <ul style="list-style-type: none"> <li>• Reversible injury</li> </ul> </li> </ul>	4

- Irreversible injury:- necrosis & apoptosis
- ❖ Intracellular accumulation
- ❖ Cellular adaptation
- ❖ Degenerative changes

<b>Week2</b>	<p><b>Inflammation</b></p> <p><u>In these lectures you will understand the following:</u></p> <ul style="list-style-type: none"> <li>❖ Acute inflammation <ul style="list-style-type: none"> <li>• Vascular changes</li> <li>• Cellular changes</li> <li>• Chemical mediators</li> <li>• Morphological pattern of acute inflammation</li> <li>• Fate of acute inflammation</li> </ul> </li> <li>❖ Chronic inflammation <ul style="list-style-type: none"> <li>• Causes</li> <li>• Morphological features</li> </ul> </li> <li>❖ Granulomatous inflammation</li> </ul>	<b>4</b>
<b>Week3</b>	<p><b>Healing &amp; repair</b></p> <p><u>In these lectures you will understand the following:</u></p> <ul style="list-style-type: none"> <li>❖ Definition</li> <li>❖ Cell cycle</li> <li>❖ CT. response(including extracellular matrix component)</li> <li>❖ Regeneration</li> <li>❖ Healing of skin wounds</li> <li>❖ Healing of bone fractures</li> <li>❖ Factors affecting healing &amp; complications</li> </ul>	<b>3</b>
<b>Week4</b>	<p><b>Haemodynamic</b></p> <p><u>In these lectures you will understand the following:</u></p> <ul style="list-style-type: none"> <li>❖ Congestion</li> <li>❖ Edema</li> <li>❖ Thrombosis</li> <li>❖ Embolism</li> <li>❖ Infarction</li> <li>❖ Shock</li> </ul>	<b>6</b>
<b>Week5</b>	<p><b>Infectious diseases</b></p> <ul style="list-style-type: none"> <li>❖ host organism interaction</li> <li>❖ defenses mechanism</li> <li>❖ categories of infectious agents</li> <li>❖ route of entry of microorganisms</li> <li>❖ how infectious agents causes disease</li> <li>❖ selected human infectious disease <ul style="list-style-type: none"> <li>• Tb.&amp; respiratory tract infections</li> <li>• Leprosy</li> <li>• Bilharziasis</li> <li>• Hydatid disease</li> <li>• Aspergillosis</li> </ul> </li> </ul>	<b>10</b>

- Pyogenic bacterial infection: staphylococcal & streptococcal spp.
- Gastrointestinal tract infections
- Sexual transmitted diseases

<b>Week6,7</b>	<b>Neoplasia</b> <u>In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ Normal cell growth</li> <li>❖ Molecular base of cancer</li> <li>❖ Cancer etiology</li> <li>❖ Features of transformed cells</li> <li>❖ Nomenclatures</li> <li>❖ Non-neoplastic mass</li> <li>❖ Morphological differences of benign from malignant</li> <li>❖ Grading &amp; staging of tumors</li> <li>❖ Cancer epidemiology</li> <li>❖ Host immunity against tumors</li> <li>❖ Immune surveillance</li> <li>❖ Clinical feature of tumors</li> <li>❖ Lab diagnosis of cancer</li> </ul>	<b>12</b>
<b>Week 8</b>	<b>Genetic disease</b> <b>students must educate;</b> <ul style="list-style-type: none"> <li>❖ Mutation</li> <li>❖ Mendelian disorders (diseases caused by single gene defects)</li> <li>❖ Disorders with multifactorial inheritance</li> <li>❖ Single gene disorders with a typical patterns of inheritance</li> <li>❖ Pediatric diseases</li> <li>❖ Congenital malformation</li> </ul>	<b>6</b>
<b>Week9</b>	<b>Disorders of immune system</b> <b>students must educate;</b> <ul style="list-style-type: none"> <li>❖ Introduction (cells, cytokines, histocompatibility)</li> <li>❖ Immune mechanism of tissue injury</li> <li>❖ Autoimmune diseases <ul style="list-style-type: none"> <li>• Self tolerance</li> <li>• Mechanism of autoimmune diseases</li> <li>• Selective examples of autoimmune diseases</li> </ul> </li> <li>❖ Immune deficiency disease</li> <li>❖ Amyloidosis</li> </ul>	<b>5</b>
<b>Week10</b>	<b>Environmental diseases,</b> <u>In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ Air pollution diseases</li> <li>❖ Injury by chemical agents</li> <li>❖ Injury by physical agents</li> <li>❖ Nutritional diseases <ul style="list-style-type: none"> <li>• Metabolic effect of starvation</li> </ul> </li> </ul>	<b>4</b>

- Nutritional deficiencies
- Protein energy malnutrition syndrome
- Vitamins deficiency
- Mineral deficiency

<p><b>Week 11, 12</b></p>	<p><b>Cardiovascular system</b>  <b>students must educate;</b></p> <ul style="list-style-type: none"> <li>❖ The heart <ul style="list-style-type: none"> <li>• Congestive heart failure</li> <li>• Ischemic heart disease</li> <li>• Hypertensive heart disease</li> <li>• Valvular heart disease</li> <li>• Congenital heart diseases</li> </ul> </li> <li>❖ The arterial disease <ul style="list-style-type: none"> <li>• Arterioseclerosis</li> <li>• Vasculitis</li> <li>• aneurysm</li> </ul> </li> <li>❖ Venous disease <ul style="list-style-type: none"> <li>• Varicose viens</li> <li>• Phlebothrombosis &amp; thrombophilibitis</li> </ul> </li> <li>❖ Lymphatic disorders</li> <li>❖ Vascular tumors</li> </ul>	<p><b>8</b></p>
<p><b>Week13,14</b></p>	<p><b>Respiratory system</b>  <b>students must educate;</b></p> <ul style="list-style-type: none"> <li>❖ Obstructive &amp; restructive lung disease</li> <li>❖ Vascular lung diseases</li> <li>❖ Pulmonary infection</li> <li>❖ Lung tumors</li> <li>❖ Pleural effusion</li> <li>❖ Lesion of upper respiratory tract</li> </ul>	<p><b>8</b></p>
<p><b>Week15,16</b></p>	<p><b>Urinary system</b>  <b>students must educate;</b></p> <ul style="list-style-type: none"> <li>❖ Glomerular diseases</li> <li>❖ Diseases affecting tubules and interstitium</li> <li>❖ Cystic disease of the kidney</li> <li>❖ Urinary out flow obstruction</li> <li>❖ Tumors</li> </ul>	<p><b>8</b></p>
<p><b>Week 17</b></p>	<p><b>Reproductive system</b>  <u><b>In these lectures you will understand the following:</b></u></p> <ul style="list-style-type: none"> <li>❖ Male reproductive system <ul style="list-style-type: none"> <li>• Diseases of penis</li> <li>• Diseases of secretum, testis, epididimis</li> <li>• Diseases of prostate</li> </ul> </li> </ul>	<p><b>4</b></p>

<b>Week 18</b>	<b>Female reproductive system</b> students must educate; <ul style="list-style-type: none"><li>❖ Valvitis</li><li>❖ Non- neoplastic epithelial tumors</li></ul>	<b>4</b>
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- ❖ Vulval tumors
- ❖ Vagina (vaginitis, vaginal intraepithelial neoplasia & ca)
- ❖ Cervix (inflammation, tumor)
- ❖ Body of uterus
- ❖ Fallopian tube diseases
- ❖ Ovaries
- ❖ Diseases of pregnancy

<b>Week 19</b>	<b>Diseases of the breast,</b> <u>In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ Inflammation</li> <li>❖ Fibrocystic disease(including non-proliferative &amp;proliferative)</li> <li>❖ Tumors,risk factors,gross and microscopical features</li> <li>❖ Male breast</li> <li>❖</li> </ul>	<b>3</b>
<b>Week 20,12</b>	<b>Gastrointestinal diseases</b> <u>In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ Oral cavity <ul style="list-style-type: none"> <li>• Ulcerative and inflammatory lesion</li> <li>• Leukoplakia</li> <li>• Tumor of the oral cavity and tongue</li> <li>• Salivary gland diseases (inflammation and tumors)</li> </ul> </li> <li>❖ Esophagous <ul style="list-style-type: none"> <li>• Esophagitis including Barrettes- esophagous</li> <li>• Anatomic and motors disorders (hiatus hernia, achalsia, varices, Mallory- Weiss syndrome)</li> <li>• Carcinoma types,predisposing factors.</li> </ul> </li> <li>❖ Stomach <ul style="list-style-type: none"> <li>• Gastritis</li> <li>• Gastric ulcer</li> <li>• Tumors, predisposing factors.</li> </ul> </li> <li>❖ Small and large intestine <ul style="list-style-type: none"> <li>• Developmental anomalies</li> <li>• Vascular disorders</li> <li>• Diarrheal diseases</li> <li>• Idiopathic inflammatory bowel diseases</li> <li>• Colonic diverticulosis</li> <li>• Tumors of small and large intestine</li> </ul> </li> <li>❖ Appendix <ul style="list-style-type: none"> <li>• Appendicitis</li> <li>• Tumors</li> </ul> </li> <li>❖ Liver <ul style="list-style-type: none"> <li>• Jaundice</li> <li>• Hepatic failure</li> <li>• Hepatic cirrhosis</li> <li>• Inflammatory disorders</li> </ul> </li> </ul>	<b>10</b>

- Drug and toxin induce liver disease
- In born errors of metabolism
- Circulatory disorders
- Intrahepatic biliary tract disease
- ❖ Gallbladder and biliary tract
  - Disorders of gall bladder
  - Disorder of extrahepatic bile tract
  - tumors
- ❖ pancreas
  - pancreatitis
  - diabetes mellitus
  - islet cell tumors

<b>Week 22</b>	<b>Endocrinal system,</b> <u>In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ pituitary gland           <ul style="list-style-type: none"> <li>• hypopituitarism</li> <li>• hyperpituitarism</li> <li>• posterior pituitary syndrome</li> </ul> </li> <li>❖ thyroid gland           <ul style="list-style-type: none"> <li>• clinical condition (hyper and hypothyroidism)</li> <li>• thyroiditis</li> <li>• goiter</li> <li>• neoplasm of thyroid gland</li> </ul> </li> <li>❖ parathyroid gland           <ul style="list-style-type: none"> <li>• hypoparathyroidism</li> <li>• hyperparathyroidism</li> </ul> </li> <li>❖ adrenal gland           <ul style="list-style-type: none"> <li>• adrenocortical hyperfunction</li> <li>• adrenocortical insufficiency</li> <li>• neoplasm</li> <li>• adrenomedullary diseases</li> </ul> </li> <li>❖ multiple endocrine neoplasia syndrome</li> </ul>	<b>6</b>
<b>Week</b>	<b>Diseases of blood and bone marrow,</b>	<b>6</b>
<b>23,24</b>	<u>In these lectures you will understand the following:</u> <ul style="list-style-type: none"> <li>❖ red cells disorders           <ul style="list-style-type: none"> <li>• hemorrhage</li> <li>• haemolytic anemia</li> <li>• anemia and diminished erythropoiesis</li> <li>• polycythemia</li> </ul> </li> <li>❖ white cells disorders           <ul style="list-style-type: none"> <li>• non- neoplastic disorders of WBC</li> <li>• neoplastic proliferation of WBC(lymphoma, leukemia, myeloproliferative disease)</li> </ul> </li> </ul>	



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|--|---|--|
|  | <ul style="list-style-type: none"><li>❖ <b>bleeding disorders</b><ul style="list-style-type: none"><li>• <b>thrombocytopenia</b></li><li>• <b>coagulative disorders</b></li></ul></li></ul> |  |
|--|---|--|

❖ diseases of spleen and thymus

<p><b>Week 24, 25</b></p>	<p><b>Diseases of locomotors system</b>, students must educate;</p> <ul style="list-style-type: none"> <li>❖ diseases of bone           <ul style="list-style-type: none"> <li>• congenital and hereditary diseases of bone</li> <li>• osteoporosis and acquired metabolic diseases</li> <li>• osteomyelitis</li> <li>• pagets diseases</li> <li>• bone tumors</li> </ul> </li> <li>❖ diseases of joints           <ul style="list-style-type: none"> <li>• osteoarthritis               <ul style="list-style-type: none"> <li>• gout</li> <li>• infectious arthritis</li> </ul> </li> </ul> </li> <li>❖ diseases of skeletal muscle           <ul style="list-style-type: none"> <li>• muscle atrophy</li> <li>• myasthenia graves</li> <li>• inflammatory myopathies</li> <li>• muscular dystrophy</li> </ul> </li> <li>❖ soft tissue tumors           <ul style="list-style-type: none"> <li>• tumors of adipose tissue</li> <li>• tumors and tumor like lesion of fibrous tissue</li> <li>• neoplasm of skeletal muscle</li> <li>• smooth muscle tumors</li> </ul> </li> </ul>	<p><b>4</b></p>
<p><b>Week 26</b></p>	<p><b>The nervous system</b>, students must educate;</p> <ul style="list-style-type: none"> <li>❖ introduction (cells of the nervous system)</li> <li>❖ edema, herniation and hydrocephalous</li> <li>❖ vascular diseases</li> <li>❖ CNS trauma</li> <li>❖ Infection of the NS</li> <li>❖ Neoplasm of the CNS</li> <li>❖ Primary diseases of myelin</li> <li>❖ Degenerative diseases</li> <li>❖ Diseases of peripheral nervous system</li> </ul>	<p><b>4</b></p>