



# Paramedical Program

<b>Specialization</b>	<b>Medical Laboratories</b>
<b>Course Number</b>	<b>020807111</b>
<b>Course Title</b>	<b>Pathology</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(3)</b>
<b>Practical Hours</b>	<b>(0)</b>



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



### Brief Course Description:

This course deals with the causes and mechanisms of human diseases, Therefore it is one of main foundations of medicine, and it serves to bridge basic medical disciplines with clinical sciences. Moreover, it introduces the basic concepts, terminology, etiology, and characteristics of pathological processes.

### Course Objectives:

Upon the completion of the course, the student should be able to:

1. Understand basic tissue reactions to different types of injuries
2. Know the etiology of major diseases
3. Know the pathogenesis (how) of the diseases
4. Describe the morphologic effects produced by the disease
5. Describe the effects of the disease on the function of organs
6. Know the outcome and possible complications of the disease
7. Know the signs and symptoms of disease – **Clinical features.**

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## Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1	Introduction	<ul style="list-style-type: none"> <li>- Definition of Pathology</li> <li>- Homeostasis</li> <li>- Types, Causes &amp; Mechanisms of Cell Injury</li> <li>- Cellular Adaptation: Atrophy, Hypertrophy, Hyperplasia and Metaplasia</li> <li>- Cell Death: Necrosis, Apoptosis, Gangrene</li> </ul>	
2	Inflammation	<ul style="list-style-type: none"> <li>- Causes, Mechanism and Signs of inflammation</li> <li>- Inflammatory cells</li> <li>- Vascular and Cellular Response</li> <li>- Acute and Chronic inflammation</li> <li>- Edema - Inflammatory Exudates</li> </ul>	
3	Neoplasia	<ul style="list-style-type: none"> <li>- Benign and Malignant neoplasm</li> <li>- Invasion and Metastasis</li> <li>- Carcinogenesis</li> </ul>	
4	Genetics and Congenital Disorders	<ul style="list-style-type: none"> <li>- Pattern of Inheritance</li> <li>- Type of Congenital disorders: Genetic Disorders, Malformations, Multifactorial</li> <li>- Disorders due to Environmental Influences: Irradiations, Chemicals and Drugs,</li> </ul>	

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5	Hemodynamic (Circulatory) Disorders,	<ul style="list-style-type: none"> <li>- Edema , congestion, arterial and vein occlusions.</li> <li>- Blood Clotting and Coagulation and hemorrhage</li> <li>- Thrombosis ,Embolism- Types of Embolism. DIC</li> <li>- Ischemia and Infarction</li> <li>- Shock- Mechanism and Common types of shock</li> </ul>	
6	Heart and Blood Vessels Pathology	<ul style="list-style-type: none"> <li>- Arteriosclerosis</li> <li>- Coronary Heart Disease, Ischemic Heart Disease, Angina Pectoris. Myocardial infarction. Rheumatic Heart Disease , Pericarditis, Cardiomyopathy</li> <li>- Varicose veins, Aneurysm</li> <li>- Vasculitis</li> </ul>	
7	Pulmonary Pathology	<ul style="list-style-type: none"> <li>- Rhinitis. Pharyngitis. Sinusitis. Laryngitis. Bronchitis</li> <li>- Pneumonia, COPD, Bronchiectasis , Interstitial Lung Diseases Atelectasis</li> <li>- Tuberculosis</li> <li>- Lung cancers:- Squamous carcinoma, Adenocarcinoma , Small cell carcinoma,</li> </ul>	
8	Gastrointestinal Pathology	<ul style="list-style-type: none"> <li>- Esophagus: Obstruction, Reflux , Varices. Cancer</li> <li>- Stomach : Gastritis. Peptic Ulcer, Gastric cancer</li> <li>- Disorders of Intestines: Obstruction, Mal-absorption, Inflammations – Infections , Neoplasms and cancer. Polyps. Appendicitis.</li> </ul>	
9	Hepatobiliary and Pancreas Pathology	<ul style="list-style-type: none"> <li>- Liver: Hepatitis- Viral Hepatitis- Alcoholic</li> <li>- Hepatitis , Fatty liver , Cirrhosis.</li> <li>Bilirubin: Conjugated &amp; Un-conjugated</li> <li>Bilirubin -Jaundice.</li> <li>-Gallbladder and Biliary tract: Chole-cystitis</li> </ul>	



		<p>Chole-lithiasis</p> <p>-Tumors of Liver: Hepatocellular carcinoma</p> <p>- Pancreas: acute and chronic pancreatitis.</p> <p>Tumors</p>	
10	Renal & Male Reproductive Pathology	<p>- Hydronephrosis</p> <p>- Urolithiasis</p> <p>- Tumors of Kidney: clearcellular ca, Wilm's tumor</p> <p>- Prostate: hypertrophy and cancer</p> <p>- Testis: Hernia, Hydrocele and cancer</p>	
11	Breast Pathology	<p>- Mastitis</p> <p>- Fibroadenoma and Fibrocystic disease,</p> <p>- Breast Cancer</p>	
12	Bone Pathology	<p>- Acute and Chronic Osteomyelitis</p> <p>- Osteoporosis</p> <p>- Osteomalacia and Rickets</p> <p>- Bone tumors</p>	
13	Central Nervous System Pathology	<p>Cerebral edema , hemorrhage , Hydrocephalus ; - Ischemia &amp; Cerebral infarction , Meningitis</p> <p>- Tumors : Glioma, Meningioma</p>	



**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Homeworks	10%	--/--/----
	Final Exam	50%	--/--/----

**Teaching Methodology:**

- ❖ Lectures
- ❖ Slides and posters
- ❖ Practice inside labs
- Power Point Presentation

**Text Books & References:****Reference**

- 1- Kumar, Abbas, Asres, Basic Pathology. Elsevier, 10th ed. 2017.
- 2- Pathology Picture Book. Stevens, Lowe, Kirk; Mosby. 4th ed. 2014.
- 3- Muir's Textbook of Pathology 15th ed. 2016. Edited by c. Simon Herrington. CRC Press, Taylor & Francis Group.
- 4- Essentials of Pathophysiology : Concepts of Altered Health States , ( Carol Mattson Porth Wolters Klumer 4th ed. 2015.



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