



كلية الصيدلة جامعة الزيتونة الأردنية
Faculty of Pharmacy
Al-Zaytoonah University of Jordan

" نحو تعليم صيدلاني متميز "
Toward Excellence in Pharmaceutical
Education

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"Tradition and Quality"

Detailed Course Description - Course Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-3.0E
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Faculty	Pharmacy	Department	Pharmacy
Course number	0201333	Course title	Pathophysiology for Pharmacist
Number of credit hours	2	Pre-requisite/co-requisite	Physiology 2

Brief course description: Pathology is the study of disease process and the response of normal tissue to injury. It the scientific link between basic sciences and clinical medicine. It provides a comprehensive and yet, concise account of the important feature of disease and to link, where possibly, the pathological changes with effects on the patients. This will help students to understand disease in the individual patient.

Course goals and learning outcomes	
Goal 1	Introduce the terminology of pathophysiology and the aspects of the disease process.
Learning outcomes	1.1. Define pathophysiology and the concepts of health and disease 1.2. Describe the aspects of the disease process including etiology, pathogenesis, signs and symptoms, etc.
Goal 2	Understand basic tissue reactions to different types of injuries, and know the etiology and pathogenesis of major diseases
Learning outcomes	2.1. Describe the cell changes according to the type of injurious agents. 2.2. Describe the different types, causes and mechanisms that produce cell injuries and diseases and differentiate between them. 2.3. Describe the mechanism and body reaction to the body changes associated with different diseases in the different systems as: cardiovascular system, respiratory system, endocrine system etc.
Goal 3	Describe the morphologic effects produced by the disease in different systems (e.g., cardiovascular system, respiratory system, endocrine system, etc)
Learning outcomes	3.1. Know the outcome and possible complications of the disease 3.2. Identify compensatory mechanisms that occur in response to trauma and disease
Textbook	1. Pathophysiology CM Porth; 2014, 9 th Edition.
Supplementary references	Text book: Robbins Basic Pathology 8E Kumar et. al. Kumar Abbas , Fausto Mitchell SAUNDERS ELSEVIER 1. Pathophysiology CM Porth; second edition



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Course timeline

Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1 1	Pathophysiology, Introduction To Pathology, etiology, Pathogenesis, morphology, Clinical manifestations, Diagnosis, Clinical course, Epidemiology.	1-11	Chapter 1
02	1 1	Cell Injury, Cell Death, And Adaptations: Overview of Cellular Responses to Stress And Noxious Stimuli, Cellular Adaptations to Stress, Overview of Cell Injury And Cell Death. Cell Injury, Causes Of Cell Injury, The Morphology Of Cell And Tissue Injury, Examples Of Cell Injury And Necrosis, Apoptosis, Intracellular Accumulations, Pathologic Calcification, Cellular Aging.	101-117	Chapter 5
03	1 1	Acute And Chronic Inflammation: Overview Of Inflammation, Acute Inflammation, Morphologic Patterns of Acute Inflammation.	307-316	Chapter 14
04	1 1	Acute And Chronic Inflammation: Chronic Inflammation, Systemic Effects of Inflammation. Systemic Effects of Inflammation.	317-326	Chapter 14
05	1 1	Neoplasia: Nomenclature, Characteristics Of Benign And Malignant Neoplasms, etiology of cancer, clinical manifestations.	161-189	Chapter 8
06	1 1	Disorder of hemostasis: mechanisms of hemostasis, hypercoagulability states, examples of hemorrhage.	649-663	Chapter 26
07	1 1	Thrombosis: Edema, Hyperemia And Congestion Embolism, Infarction, shock.	81-106	Robbins Basic Pathology
08	1 1	Fluid, electrolyte and acid base imbalances. Fluid compartment relationships. Fluid volume excess and fluid volume deficit. Sodium, potassium and calcium imbalances Acid – base imbalances	39+40	
09	1 1	The Heart: Heart Failure: pathophysiology of heart failure, compensatory mechanisms, clinical manifestations of heart failure. Congenital Heart Disease, Ischemic Heart Disease (IHD), Hypertensive Heart Disease.	379-419	Robbins Basic Pathology



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10	1 1	The Heart: disorders of cardiac function Pericardial Disease, Cardiomyopathies, Valvular Heart Disease.	793-829	Chapter 32
11	1 1	The Lung: Acute Lung Injury, Atelectasis Obstructive Versus Restrictive Pulmonary Diseases, Obstructive Pulmonary Disease, Emphysema, Chronic Bronchitis	934-942	Chapter 36
12	1 1	The Lung: Asthma, And Chronic bronchiectasis Diffuse Interstitial (Restrictive, Infiltrative) Lung Diseases. Acute Respiratory Distress Syndrome	964-978	Chapter 37
13	1 1	Endocrine: Hypopituitarism, Hypopituitarism, Hyperpituitarism, Diseases of Posterior Pituitary, Diseases of Thyroid, Gland Hyperthyroidism, Hypoparathyroidism, Hyperparathyroidism,	1277- 1293	Chapter 49
14	1 1	Diseases of Adrenal Gland Diabetes mellitus	1293- 13331	Chapter 50
15	1 1	The Gastrointestinal Tract: 1- Esophagus, Anatomic And Motor Disorders, Barrett Esophagus, Esophageal Carcinoma, Varices, Esophagitis 2- Stomach, Gastritis, Gastric Ulceration. 3-Small And Large Intestines, Developmental Anomalies, Vascular Disorders, Colonic Diverticulosis, Bowel Obstruction, Inflammatory Bowel Disease.	1170- 1200	Chapter 45
16	1 1	The Liver, Gallbladder, And Biliary Tract, The Liver, Disorders Of The Gallbladder And The Extrahepatic Biliary Tracts	1214- 1228	Chapter 46

Theoretical course evaluation methods and weight	First exam 25% Second exam 25% Final exam 50%	Practical (clinical) course evaluation methods	Semester students' work = 50% (Reports, research, quizzes, etc.) Final exam = 50%
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Approved by head of department		Date of approval	
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Extra information (to be updated every semester by corresponding faculty member)

Name of teacher	Dr. Balqis Ikhmais	Office Number	
Phone number (extension)		Email	b.ikhmais@zuj.edu.jo
Office hours			