College of Nursing

Course Syllabus

Basic Science

(Pathophysiology)

2021-2022

Developed by: Pro. Assistant . Dr. Ala'a Hassan Mirza Hussain

Course Description:

This course is designed to provide the nursing students with a comprehensive knowledge with the principle and basic concepts in pathology and evolution of physiological alteration associated with altered health and diseases, including cell injury, adaptation, abnormality in genome, neoplasia, infectious processes, inflammation and immunity Also the course focuses on disorders in WBC, and RBC, alteration in blood flow and cardiac function, respiratory disorders, in addition to physiological changes associated with different pathological conditions such as disorder in GIT and skeleton diseases.

A- Cognitive goals

1- Enable students to obtain knowledge and understanding of the causes of diseases, their mode of occurrence and the accompanying changes at the level of the cell, tissue, organ and .body, in addition to structure and function.

2- He has a skill that enables him to differentiate between different diseases in terms of their .effects on the body.

3 - Enable the student to analyze the impact of the disease on the body and its .complications.

4- Enable the student to distinguish the necessary examinations for pathological conditions, .such as laboratory, radiological and other examinations.

5- Analyze the reason for choosing a treatment over another.

B - Skills objectives of the program

.1 - Enable the student to differentiate between pathological conditions

2 - Enable the student to understand the complications associated with sick conditions.

.**Evaluation Methods**: examination, activities, Quizzes.

Faculty Information

. Assistant Prof. Dr. Ala'a Hassan Mirza Hussain

Date of Class	Unit to be Covered and/or Activity
Week 1	Introduction : ١,١. Definition, diseases, causes of diseases, pathogenesis, clinical manifestations, diagnostic methods and treatment .
Week 2	:Changes at cellular level ٢,١. Cell, Cellular adaptation, injury, reversible and irreversible cell injury, cell death, types of cell death, necrosis (types causes and sequel of necrosis .(
Week3	Genes and genetic diseases : ٣,١. Component and function of gene, mutation, chromosome, genetic and chromosomal disorders (single gene disorders and alteration in autosomal and sex chromosomes), causes, diagnosis .
Week 4	Inflammation : ٤,١. Definition, causes, acute inflammation, signs, hematological and cellular responses, beneficial and harmful effects and outcome of acute inflammation, chronic inflammation, characteristic features. Repair and tissue healing.
Week5	Neoplasia ٥,١. Definition, types, nomenclature, characteristics of each type ، carcinogenesis and causes of cancer, diagnosis and treatment .
Week 6	Hypersensitivity and Autoimmune diseases ٧,١. Definition of hypersensitivity, types of hypersensitivity ،(mechanism of development of each type), transplantation immunopathology. Autoimmune diseases, immunodeficiency diseases ، AIDS.
Week 7	:Disorders in white blood cells and lymphoid tissue : ٨,١. Origin of blood cells, neutropenia, infectious mononucleosis, leukemia ، Hodgkin's lymphoma(HL), NHL, Burkitt's lymphoma, and multiple myeloma.
Week 8	Alterations in RBC and oxygen transport : ٩,١. Red cell metabolism, hemoglobin oxidation, anemia, causes ، haemolytic anemia classification, hereditary Spherocytosis ، thalassemia, glucose-6-phosphate Dehydrogenase deficiency (G6PD),other types of anemia megaloplasic anemia ، Plycythemia . Platelet disorders.
Week 9	Disturbances in blood flow : ١٠,١. Structure of blood vessels, alteration in arterial blood flow ؛ atherosclerosis, mechanism of atherosclerosis development, aneurysm ، dissecting aneurysm, hypertension, orthostatic hypotension, assessment of arterial flow. Alteration in venous flow; varicose, venous thrombosis .

Week 10	Alteration in cardiac function : .١١,١ Disorder in the epicardium, coronary heart disease, ischemic heart disease (angina). Myocardial infarction, myocardial disease, infective myocarditis, rheumatic heart disease, mitral valve disorders, stenosis ، congenital heart defects, heart failure and circulatory shock .
Week 11	Alteration in kidney : .١٢,١ Congenital anomalies, polycystic kidney, nephritis, acute proliferative glomerulonephritis, nephrosis, diabetic nephropathy ، hypertensive glomerular disease, tubular disorders, pyelonephritis ، renal failure.
Week 12	GIT Disorders
Week 13	Disorders in the Respiratory System
Week 14	Disorders in the Nervous System
Week 15	Disorders in the Skeleton

Two hours theory weekly for 15 weeks

المصادر:

Kumar, Abbas and Aster: Robbins Basic Pathology 10th ed 2018

C Simon Herrington: Muir's Textbook of Pathology 15th ed 2014