

**Al-Al Bayt University**  
**Princess Salma Faculty of Nursing**  
**Adult Health nursing**

**Course Title :**Pathophysiology

**Course Number :**1001202

**Credit Hours :**3

**Pre requisite :**1001210

**Placement :**

**Instructor:** m\_khalaileh ,

**Course Description :**

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**General objectives :**

Course Objectives:

&#8226; Discuss the pathophysiologic changes that occur as a result of altered health states in selected basic concepts commonly encountered in nursing practice.

&#8226; Define the components of the disease process: etiology, pathophysiology, clinical manifestations, treatment, and prevention.

&#8226; Describe the general pathologic mechanisms producing signs and symptoms of specific disease processes commonly encountered in nursing practice

&#8226; Identify how each organ system participates in the total regulatory and homeostatic mechanisms of the body.

&#8226; Discuss the risk factors that affect the person in different body functions.

&#8226; Discuss the different treatment modalities for selected pathological conditions.

**Course outline :**

**Cellular adaptation**

Cellular Adaptation, Injury, and Death and wound healing.

- Cellular adaptation.
- Cell Injury and Death
- Mechanism of cell injury
- Tissue Repair and wound healing

**Hematology**

Hematopoietic Function

- Composition of blood and formation of blood cells.

Alteration in hemostasis

- Mechanism of hemostasis
- Hypercoagulability states
- Bleeding disorders
- The Red Blood Cell
- Production
- Destruction
- Cell metabolism and hemoglobin oxidation.

- White Blood Cell

- Bone marrow and Hematopoiesis.

- Lymphoid Tissues.

**Immune system**

Infection, Immunity and inflammation.

- Infections disease

- Mechanism of infection.

The inflammation responses

- Immune system
- Immunodeficiency Diseases
- Allergic and hypersensitivity Disorders
- Transplantation Immunopathology
- Autoimmune diseases
- Acquired Immunodeficiency syndrome
- Pathophysiology
- HIV infection

## **Cardiovascular system**

Cardiovascular Function

Organization of the systemic circulatory system

Neural control of circulatory function

- Baroreceptors
- Chemoreceptors
- Autonomic regulation of cardiac function
- Autonomic regulation of vascular function
- Autonomic neurotransmitters
- Autonomic response to circulatory stress

Alteration in Blood Flow in the Systemic Circulation

Disorders of the arterial circulation

- Hyperlipidemia
- Atherosclerosis
- Aneurysms

&#8226; Alteration in Blood pressure

&#8226; Hypertension

&#8226; Essential hypertension

&#8226; Secondary hypertension

&#8226; Malignant hypertension

Alteration in cardiac function

Coronary heart disease

- Coronary circulation and pathogenesis of coronary heart disease
- Chronic Ischemic heart diseases
- Acute coronary syndromes

Disorders of cardiac conductive system and rhythm

- Cardiac conductive system
- Action potential
- Electrocardiography
- Types of dysrhythmias

Heart Failure and Circulatory shock

Heart failure

Physiology of HF

Congestive HF

Acute pulmonary edema

    Carcinogenic shock

## **Respiratory system**

Alteration in Respiratory Function

Respiratory Infections

- influenza
- pneumonia
- tuberculosis
- fungal infections

    Obstructive Airway Disorders

- Bronchial asthma
- Chronic obstructive pulmonary diseases

    Pulmonary Vascular Disorders

- Pulmonary embolism
- Pulmonary hypertension
- Acute respiratory distress syndrome

    Respiratory failure

## **Renal system**

Renal Function

- The nephron
- Urine formation
- Regulation of renal blood flow

Alteration in renal function

Urinary tract infections

Disorders of glomerular function

- Nephrotic syndrome
- Chronic glomerulonephritis

    Tubulointerstitial Disorders

- renal tubular acidosis
- pyelonephritis

Renal Failure

- Acute renal failure
- Chronic renal failure

## **GIT**

Gastrointestinal Function

- Secretary Function
- Attrition in gastrointestinal function
- Manifestation of GI disorders
- Disorders of the stomach
- Hepatic and Biliary Disorders

## **Endocrine**

Endocrine Function

Endocrine system

- Hormones
- Control of Hormones levels

Alteration in endocrine function

Diabetes Millitus

Classification and Etiology

Manifestations

Acute and chronic complication

**Neural**

Neural Function

Nerve cell communication

Organization and control of somatosensory function.

- Pain
- Pain theories
- Mechanisms and pathways
- Threshold and Tolerance

Disorders of function

Mechanism and manifestations of brain injury

Cerebrovascular Disease

- Stroke (Brain attack)
- Aneurismal subarachnoid Hemorrhage

**MSS**

Musculoskeletal Function

Injury and Trauma of Musculoskeletal Structure

Bone infections

Osteonecrosis

Metabolic Bone diseases

- Osteopenia
- Osteoprasis
- Osteomalacia
- Paget&#8217;s disease
- Osteoarthritis syndrome

**Evaluation methodology :**

First Exam.....20

Second Exam.....20

Assisngment.....10

Final exam.....50

**References :**

\*Concept of altered health states6, lipincott,

**Course Schedule :**

| Topic | Hours |
|-------|-------|
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No Information Available...