

Hemato-Lymphoid System

First Semester 2023/2024

Number of Lectures and Laboratory Sessions: 54

4 Credit hours

Course number: 0500371

Subject	Lecture number	Topic
Histology	1	Blood cells-1 (Histology of Erythrocytes)
	2	Blood cells-2 (Histology of Granulocytes)
	3	Blood cells-3 (Histology of Agranulocytes and Thrombocytes)
	4	Hematopoiesis- 1 (Erythropoiesis)
	5	Hematopoiesis- 2 (Granulopoiesis)
	6	Lymphatic system-1 (Histology of Lymph nodes)
	7	Lymphatic system-2 (Histology of Spleen, Tonsils and MALT)
	8	Lymphatic system-3 (Histology of Thymus, T cells development)
Physiology	1	Introduction (Blood composition, function, hematocrit, plasma, hematopoiesis)
	2	Erythrocytes (general characteristics, function of RBCs, RBC life cycle, erythropoiesis,)
	3	Erythrocytes (RBC parameters) Hemoglobin (Definition, concentration, structure)
	4	Thrombocytes (Production, approximate concentration, structure and survival time, Platelet function)
	5	Leukocytes (Cell types, the percent distribution of the different cell types)
	6	Leukocytes (Continued, phagocytosis, variations in leukocyte count)
	7	Hemostasis
	8	Regulation of hemostasis (fibrinolysis, thromboembolic conditions)
	9	Blood groups and blood transfusion
	10	Body fluids and Lymphatic system
Biochemistry	1	Hemoglobin Overview
	2	Regulation of Hemoglobin function
	3	Hemoglobinopathies
	4	Metabolism in Erythrocytes
	5	Metabolism of iron (Synthesis, storage, transport and genetic diseases)
	6	Biochemical view of Blood coagulation-1
	7	Biochemical view of Blood coagulation-2
Pathology	1	Red blood cells disorders-1
	2	Red blood cells disorders-2
	3	Red blood cells disorders-3
	4	Red blood cells disorders-4
	5	Bleeding disorders
	6	White blood cells disorders-1
	7	White blood cells disorders-2
	8	White blood cells disorders-3
	9	White blood cells disorders-4
	10	White blood cells disorders-5
Microbiology	1	Blood protozoa: Plasmodium & Babesia
	2	Hemoflagellates: Trypanosoma and Leishmania
	3	Viral diseases in the hematology-1
	4	Viral diseases in the hematology-2
Pharmacology	1	Agents used in Anemias
	2	Hematopoietic growth factors
	3	Drugs used in Thromboembolic Diseases-1
	4	Drugs used in Thromboembolic Diseases-2
	5	Drug treatment in hematopoietic malignancy-1
	6	Drug treatment in hematopoietic malignancy-2

	7	Antimalarial drugs
	8	Antiviral drugs
Clinical	1	Case presentation
	2	Case discussion
Physiology lab	Lab 1	Packed Cell Volume Erythrocyte Sedimentation Rate Osmotic Fragility Test
	Lab 2	Differential Leukocyte Count Reticulocyte Count
	Lab 3	Blood Typing Bleeding Time Clotting Time
Histology lab	Lab 1	Histology of Blood Cells and Primary Lymphoid Organs Erythrocytes, Leukocytes (granulocytes and agranulocytes), Thrombocytes, Bone marrow, Thymus
	Lab 2	Histology of Secondary Lymphoid Organs Lymph nodes, Spleen, Tonsils

Pathology: Dr. Tariq Aladily, tnaladily@ju.edu.jo

Histology: Prof. Dr. Heba Kalbouneh, heba.kalbouneh@ju.edu.jo

Biochemistry: Prof. Dr. Mamoun Ahram, m.ahram@ju.edu.jo

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Physiology Lab: Dr. Tamara Al-Qudah, tamara.alqudah@ju.edu.jo

System Coordinators:
Prof. Dr. Heba Kalbouneh
Dr. Fatima Daoud

Recommended books

Physiology:

- 1- Guyton and Hall Textbook of medical physiology, 13th edition, Hall.
- 2- Ganong's review of medical physiology, 25th edition. Barrett, Barman, Boitano, Brooks.

Histology:

Junqueira's Basic Histology: Text and Atlas, by Anthony L. Mescher, 15th edition.

Biochemistry:

Lippincott illustrated reviews series, 6th edition, Farrier.

Microbiology:

- 1- Basic clinical parasitology. F. A. Neva & H.W. Brown. Prentice Hall, International Editions.
- 2- Sherries Medical Microbiology, 6th edition, Ryan, Ray, Ahmad, Drew.

Pathology:

Robbins & Cotran Pathologic Basis of Disease, 11th edition, Kumar, Abbas, Aster.

Pharmacology:

Basic and Clinical Pharmacology, 13th edition, Katzung, Trevor.