

Hemato-Lymphoid System
First Semester 2020/2021
Number of Lectures and Laboratory Sessions: 55
4 Credit hours
Course number: 500371

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, Plasma proteins (majors)(M.W and concentrations)
	2	Erythrocytes (Shape, size, dimensions of normal erythrocyte, Function of RBCs Number/ul and PCV (HcT), Erythropoiesis)
	3	Hemoglobin (Definition, concentration, structure, Human Hb genetic variants)
	4	Leukocytes (Cell types, the percent distribution of the different cell types, Physiological variations in leukocyte count)
	5	Thrombocytes (Production, approximate concentration, structure and survival time, Platelet function (Hemostasis)
	6	Fibrinolysis, Thrombosis
	7	Anticoagulant (Invivo and Invitro)
	8	Body fluids and Lymphatic system
	9	Blood groups and blood transfusion- 1
	10	Blood groups and blood transfusion- 2
	11	Blood groups and blood transfusion- 3
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	Metabolism of Heme (Structure, biosynthesis and degradation)
	7	Biochemical view of Blood coagulation-1
	8	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
PBL	1	Problem based learning -1
	2	Problem based learning -2
Physiology lab	Lab 1	Red Blood Cells and White Blood Cells Count
	Lab 2	Differential Leukocyte Count Reticulocyte Count Packed Cell Volume Hemoglobin Concentration Erythrocyte Sedimentation Rate
	Lab 3	Blood Typing Bleeding Time Clotting Time Osmotic Fragility Test
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

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, 9th edition, Kumar, Abbas, Aster.

Pharmacology:

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

Course Coordinator: Dr Heba Kalbouneh

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