



Module (Course Syllabus) Catalogue 2023-2024

College/ Institute	Erbil Medical Technical Institute	
Department	MLT Department	
Module Name	Hematopathology	
Module Code	HEP303	
Degree	Technical Diploma <input checked="" type="checkbox"/> Bachler <input type="checkbox"/> High Diploma <input type="checkbox"/> Master <input type="checkbox"/> PhD <input type="checkbox"/>	
Semester	3rd	
Qualification	Master degree	
Scientific Title	Assist. lecturer	
ECTS (Credits)	6	
Module type	Prerequisite <input type="checkbox"/> Core <input checked="" type="checkbox"/> Assist. <input type="checkbox"/>	
Weekly hours	4	
Weekly hours (Theory)	(2)hr Class	(3)Total hrs Workload
Weekly hours (Practical)	(2)hr Class	(1)Total hrs Workload
Number of Weeks	16	
Lecturer (Theory)	Dldar Salih Ismahil	
E-Mail & Mobile NO.	dldar.ismael@epu.edu.iq	
Lecturer (Practical)	Dldar Salih Ismahil	
E-Mail & Mobile NO.	dldar.ismael@epu.edu.iq	
Websites	https://academicstaff.epu.edu.iq/faculty/muharam.mohammed	

Course Book

Course Description	This course aims to provide a comprehensive theoretical knowledge of medical hematology including the blood disorder, diagnosis and/or treatment of disease and disorder of blood.			
Course objectives	<p><i>Up on completion of the course the students will:</i></p> <p style="text-align: right;"><i>Up on completion of the course the students will</i></p> <ol style="list-style-type: none"> <i>1. have advanced knowledge on systematic of medical hematology.</i> <i>2. be able to understand structure, physiology, and principles and most hematology disorder.</i> <p><i>Have advanced skills on processing blood and physiological analysis and disease diagnosis.</i></p>			
Student's obligation	<ol style="list-style-type: none"> <i>1-The student attention in all theoretical and practical lectures in academic year.</i> <i>2- Completion of all tests.</i> <i>3- Attendance in exams</i> <i>4. Write or prepare reports</i> 			
Required Learning Materials	<p><i>Lecture –Main aim-highlight the problem, make sure students understand information, stimulate interest to the subject. Dialogue form of classroom work on one of the topics Use of power point presentations, boarding, conferences.</i></p> <p><i>Practice – working out skills on the basis of theoretic knowledge</i></p>			
Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome
	Paper Review	1	1	

	Assignments	Homework	0.5	4	
		Class Activity	2	2	
		Report	1	1	
		Seminar	1	1	
		Essay	0	0	
		Project	0	0	
	Quiz		1	4	
	Lab.		2	12	
	Midterm Exam		1	2	
	Final Exam		1	3	

Specific learning outcome:	<ul style="list-style-type: none"> • <i>On successful completion of this program, graduates will be able to:</i> • <i>Identify, evaluate and apply major theoretical traditions in hematology studies.</i> • <i>Understand how blood disease.</i>
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Course References:	<ul style="list-style-type: none"> • Text book of Medical Physiology, 11th edition, C. Guyton, M.D. <p>Color Atlas of Hematology, Practical Microscopic and Clinical Diagnosis, Harald Thöml, M.D.</p>
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Course topics (Theory)	Week	Learning Outcome
History of the science of hematology and introduction and approach to hematology	1	
Haemopoiesis	2	
Composition of blood	3	
Normal erythrocytes and leukocytes	4	
Hemostasis and coagulation cascade	5	
Overview of Hematopathology	6	
White blood cell disorder: Leukopenia and leukocytosis	7	

Abnormalities of red blood cells: Microcytic, normocytic and macrocytic anemias	8	
Platelet: Thrombocytopenia and thrombocytosis	9	
Bleeding disorder	10	
Thrombosis	11	
Hemochromatosis	12	

Practical Topics	Week	Learning Outcome
Safety and Guidelines for	1	
Laboratory Health Workers	2	
Microscope (Components and	3	
principles of function)	4	
Hematopoiesis	5	
Normal blood cells	6	
Abnormal blood cells	7	
Blood cells (continuation)	8	
Peripheral blood film	9	
Staining methods	10	
Laboratory hematology	11	
automation	12	

Questions Example Design

. Examples of exams:

Q1/ Choose the one best answer, (A), (B), (C), (D) to each following sentences:

- The average person has approximately of blood per kilogram body weight.
(A) 50 ml/kg (B) 70 l/kg (C) 70 ml/kg (D) 5 ml/kg
- Thrombopoietin is growth factor that regulates the proliferation and differentiation of.....
(A) WBCs (B) RBCs (C) plasma cells (D) PLTs
- is a form of anemia that occurs when there is an absence of intrinsic factor
(A) IDA (B) Anemia of chronic disease (C) Folate deficiency anemia (D) Pernicious anemia

Q2/ Complete these sentences with a word in an appropriate form:

(Globin, heme, IDA, thalassemia trait, coagulation cascade, fibrinolysis, sideroblastic anemia)

- The mitochondria are the main sites of synthesis.
- In lab diagnosis of both MCV and MCH reduced, serum iron reduced, TIBC raised, serum transferrin receptor raised, serum ferritin reduced and bone marrow iron stores absent.
- In lab diagnosis of MCV, and MCH reduced very low, serum iron and TIBC are raised; transferrin receptor variable, serum ferritin normal, bone marrow iron stores is present.
- Is a complex process by which blood form clot. It is an important part of homeostasis.
- In the iron becomes abnormally deposited in RBC which makes them unable to transport oxygen properly.

Q3/ Match the sentences halves, adding an appropriate word:

A	B
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Extra notes:

Increasing students' activities by making seminars is highly recommended.

External Evaluator

The contents of this course book are verified and totally effective.

Sevan Hassan Bakir
Lecturer