Module (Course Syllabus) Catalogue

2023-2024

College/ Institute	**Erbil Medical Technical Institute**	
Department	**MLT Department**	
Module Name	***Blood bank***	
Module Code	**BLB403**	
Degree	**Technical Diploma** ■ **Bachler** ☐ **High Diploma** ☐ **Master** ☐ **PhD** ☐	
Semester	**4rd**	
Qualification	**Master degree**	
Scientific Title	**Assist. lecturer**	
ECTS (Credits)	**5**	
Module type	**Prerequisite** ☐ **Core** ■ **Assist.** ☐	
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**	
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Lecturer (Practical)	**Dldar Salih Ismahil**	
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Websites	**https://academicstaff.epu.edu.iq/faculty/muharam.mohammed**	

Course Book

Course Description	*This course aims to provide a comprehensive theoretical knowledge of blood bank including the blood transfusion and corresponding tests.*
Course objectives	*Up on completion of the course the students will:* *Up on completion of the course the students will* 1. *Have advanced knowledge on systematic of blood bank.* *Be able to understand blood transfusion and principle tests.*
Student's obligation	*The student attention in all theoretical and practical lectures in academic year.* *2- Completion of all tests.* *3- Attendance in exams* *4. Write or prepare reports.*
Required Learning Materials	*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.* *Practice – working out skills on the basis of theoretic knowledge*

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:	• *On successful completion of this program, graduates will be able to:* • *Identify, evaluate and apply major theoretical traditions in hematology studies.* • *Understand how blood disease.*
Course References:	• Text book of Medical Physiology, 11th edition, C. Guyton, M.D. **Color Atlas of Hematology,** Practical Microscopic and Clinical Diagnosis, Harald Theml,M.D.

Course topics (Theory)	Week	Learning Outcome
Composition of blood	1	
Collection of blood and bone marrow samples	2	
Techniques of routine blood examination	3	
Techniques of hemostasis and coagulation procedures	4	
Blood transfusion	5	
Pregnancy and neonatal hematology	6	
Platelet: Thrombocytopenia and thrombocytosis	7	
Bleeding disorder	8	
Thrombosis	9	
Hemochromatosis	10	
Acute leukemia	11	
Chronic leukemia	12	

Practical Topics	Week	Learning Outcome
ABO and Rh testing	1	

Diagnostic tools in anemia	2	
Hemolysis classification system	3	
Diagnostic tools in hemolysis	4	
Thalassemia disorders	5	
Laboratory tools to diagnose	6	
Blood banking and compatibility	7	
testing (part 1)	8	
Blood banking and compatibility	9	
testing (part 2)	10	
Errors in laboratory hematology	11	
discussion	12	

Questions Example Design

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

1. 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

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

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

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

A	B
Eosinophils	Bence Jones proteins
Neutrophils	Normocytic normochromic anemia

MCV 80-100fl and MCH ≥ 27 pg	Day life between 6hrs-few days
MCV >95 fl	Macrocytic anemia
Multiple myeloma	Bilobed
	Immune defense against parasites and immune regulation

Q4/ Answer this question with put (True) or (false):

1. Site of hematopoiesis in fetus 2-7 months is liver and bone marrow.
2. The normal maturation series of erythropoiesis starts at basophilic norm oblast.
3. The HbF structure is consisted of $\alpha_2\beta_2$.
4. Hemophilia B is a recessive X-linked genetic disorder and abnormal bleeding may result from vascular disorder.
5. Lymphoma is a cancer of the blood that originate in the lymph gland

Q5/ A. Draw the typical structure of red blood cell membrane?

B. Main causes of anemia?

Extra notes:

Increasing students' activities by making seminars is highly recommended.

External Evaluator

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

Sevan Hassan Bakir

Lecturer