

Course Syllabus

1	Course title	Hematology II	
2	Course number	0308363	
3	Credit hours	2 hrs	0
	Contact hours (theory, practical)	2 theory /week	
4	Prerequisites/co-requisites	Hematology I (0308362)	
5	Program title	Clinical Laboratory Sciences	
6	Program code	0308	
7	Awarding institution	The University of Jordan	
8	School	Science	
9	Department	Clinical Laboratory Sciences	
10	Course level	3 rd year	
11	Year of study and semester (s)	Spring Semester 2023/2024	
12	Other department (s) involved in teaching the course		
13	Main teaching language	English	
14	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others: Google meet	
16	Issuing/Revision Date	18.02.2024	

17 Course Coordinator:

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18 Other instructors:

Name:
 Office number:
 Phone number:
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19 Course Description:

The goals of this course are to:

1. Learn the disorders of white blood cells especially the pathophysiology of leukemia.
2. Connect the different leukemias and lymphomas with their related differential diagnostic laboratory test and treatments.
3. Explore the hemostasis system function, interaction, and monitoring. In addition to disorders of platelets.
4. Learn the principles and procedures of routine and special hemostasis assays and the tests used to evaluate common abnormalities in coagulation and fibrinolysis.

20 Course aims and outcomes:

A- Aims:

This course aims to introduce undergraduate students to basic hemostasis system and platelets function, disorders, and monitoring testing. Also, acquire the necessary information for pathophysiology, diagnosing, treating, monitoring leukemias and lymphomas patients.

B- Students Learning Outcomes (SLOs):

For purposes of mapping the course SLOs to the CLS program SLOs, at the successful completion of the program, graduates are expected to be able to:

SLO(1). Understand and apply the theoretical foundations of medical laboratory sciences to accurately calibrate and operate advanced laboratory equipment.

SLO(2). Demonstrate knowledge of safety protocols, Ministry of Health regulations, and environmental preservation practices when handling samples of pathogens and chemical/biological risks.

SOL(3). Acquire in-depth technical knowledge to stay abreast of scientific advancements and actively participate in local and global applied research in the field.

SOL(4). Perform diverse analyses and effectively interpret results for various clinical samples across laboratory disciplines such as hematology, clinical chemistry, microbiology, urine analysis, body fluids, molecular diagnostics, and immunology.

SOL(5). Apply practical training to solve complex problems, troubleshoot issues, and interpret results, ensuring a connection between data and specific medical conditions for precise diagnosis.

SOL(6). Show effective communication skills to convey information accurately and appropriately in a laboratory setting.

SOL(7). Demonstrate a commitment to lifelong learning and innovation by applying modern techniques, critically analyzing information, and contributing to the creation and application of new knowledge in medical laboratory sciences which fulfill the requirements of national and international CBD.

SOL(8). Uphold professional ethical behavior, ensuring the confidentiality of client information, and respecting client privacy throughout all aspects of laboratory work.

SOL(9). Apply managerial skills that align with quality assurance, accreditation, quality improvement, laboratory education, and resource management, showcasing competence in the effective administration of laboratory practices.

Descriptors	ILO/ID	Program SLOs	SLO (1)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (9)
		Course SLOs						
Knowledge	A1	Understand the Kinetics of RBC Leukocytes, Their Function function, and their disorders.	X					
	A2	Become familiar with Platelet production and destruction, platelet functions and normal Hemostasis.	X					
Skills	B1	Analyze and differentiate between the different WBC disorders depending on different hematological lab values.			X			
	B2	Analyze and differentiate between the different Hemostatic disorders depending on different hematological lab values.			X			
Competence	C1	Apply knowledge to solve hematological testing problems and errors.		X		X		
	C2	Demonstrate critical thinking skills to communicate clinical hematology issues and demonstrate lab management skills..		X			X	X

21. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1	Leukocyte developments, Kinetics and Functions	A1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	1.2	Leukocyte developments, Kinetics and Functions	A1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
2	2.1	Leukocyte developments, Kinetics and Functions	A1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	2.2	Leukocyte developments, Kinetics and Functions	A1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
3	3.1	Non Malignant WBC Disorders	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	3.2	Non Malignant WBC Disorders	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.

4	4.1	Non Malignant WBC Disorders	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	4.3	Myeloproliferative Neoplasms	B1, C1	Face to Face		Synchronous	Exams and quizzes	
5	5.1	Myeloproliferative Neoplasms	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	5.2	Myeloproliferative Neoplasms	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
6	6.1	First Exam						
	6.2	Acute Leukemias	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
7	7.1	Acute Leukemias	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	7.2	Myelodysplastic syndromes	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
8	8.1	Mature Lymphoid Neoplasms	B1, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	8.2	Platelet Production, Structure and Function	A2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
9	9.1	Platelet Production, Structure and Function	A2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	9.2	Second Exam						
10	10.1	Normal Hemostasis and Coagulation	A2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	10.2	Normal Hemostasis and Coagulation	A2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
11	11.1	Normal Hemostasis and Coagulation	A2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	11.2	Normal Hemostasis and Coagulation	A2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
12	12.1	Hemorrhagic and Thrombotic Disorders	B2, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	12.2	Hemorrhagic and Thrombotic Disorders	B2, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
13	13.1	Hemorrhagic and Thrombotic Disorders	B2, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	13.2	Hemorrhagic and Thrombotic Disorders	B2, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.

14	14.1	Thrombocytopenia and Thrombocytosis	B2, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	14.2	Thrombocytopenia and Thrombocytosis	B2, C1	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
15	15.1	Lab Evaluation of Hemostasis	B2, C2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.
	15.2	Lab Evaluation of Hemostasis	B2, C2	Face to Face	Moodle	Synchronous	Exams and quizzes	Rodak's Hematology, 6 th Ed.

22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Assignments					
Quizzes					
Lab Reports					
First Exam	30			Week 5	On Campus
Second Exam or (Mid Exam)	30			Week 10	On Campus
Final Exam	40	All material	All SLOs		On Campus

23 Course Requirements

Students should have a computer, internet connection, account on Moodle

Development of ILOs is promoted through the following teaching and learning methods

1. Power point lectures
2. Videos
3. Journal articles
4. Clinical Cases
5. E-learning (Moodle)

24 Course Policies:

A- Attendance policies: Attendance of lectures and lab sessions is obligatory. Attendance will be taken each class.

B- Absences from exams and submitting assignments on time: Not accepted.

A student who has been absent for 15% or more of the total hours of any course, including absences for medical or compassionate reasons, may be required to withdraw from that particular course.

Students who miss quizzes or examinations will automatically be assigned a mark of zero unless the respective instructor, or the Program Head, has been notified of the reason for absence *PRIOR* to the commencement of the exam. Acceptable reasons will be evaluated at the time (e.g., illness - medical certificate may be required, serious illness or death in the family, etc.). Supplemental examinations may be allowed in legitimate cases.

C- Health and safety procedures:

All students need to be immunized against hepatitis B, immunization certificate must be forwarded to the coordinator of the hospital training. Pregnancy affects immunization and it is the responsibility of the student to notify the health person as soon as possible of her pregnancy. If there are fees related to immunization, it is the responsibility of the student.

D- Honesty policy regarding cheating, plagiarism, and misbehavior: Very strong.

E- Grading policy: 70% theory, 30% practical

F- Available university services that support achievement in the course:

- The University Computer Lab.
- The University Main Library.
- The University e-library.

25 References:

A- Required book(s), assigned reading and audio-visuals:

1. **Rodak's Hematology- Clinical principles and applications, 6th Ed.**
2. **Essential Hematology, 6th Ed., Hoffbrand**

B- Recommended books, materials, and media:

1. <https://evolve.elsevier.com/cs/product/9781437706918?role=student>
2. www.essentialhaematology6.com

26 Additional information:

Name of Course Coordinator: **Dr. Zaid Aburubaiha**

Signature: *Zaid Aburubaiha* Date: **2.2024**

Head of Curriculum Committee/Department: **Dr. Suzan Matar**

Signature: *Suzan Matar*

Head of Department: **Dr. Ahmed Abu siniyeh**

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Head of Curriculum Committee/Faculty: **Dr. Mu'ayyad Al Hseinat**

Signature: *Mu'ayyad Al Hseinat*

Dean: **Prof. Mahmoud Jaghoub**

Signature: *Mahmoud Jaghoub*