Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED

SCIENCES

Faculty of Laboratory medicine..

Department of Hematology

Course Specification of Advanced Hematology IV (Hematological Malignancies)

Course No. (03.13.314)

2022/2023

Prepared by:	Reviewed by:	Heamatolgy Department Charge D'affairs	Vice Dean for Quality affairs	Dean of College:
. Dr Fuad Balkam	- Dr. Abdulrahman Amer	Dr\Gamil Taher Abdul Mughni	Dr\Gamil Taher Abdul Mughni	- Associate Prof. Dr. Ebtesam Al-Zabedi

I. Course Identification and General Information:

1	**Course Title:**	Advanced Hematology IV (Hematological Malignancies)			
2	**Course Code & Number:**	03.13.314			
3	**Credit Hours:**	Theory Hours			
		Lecture	Exercise	Practical	Credit Hours
		2	0	2	3
4	**Study Level/ Semester at which this Course is offered:**	1st Level / 2nd Semester			
5	**Pre –Requisite (if any):**	None			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Master Degree Medical Diagnostic Hematology			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester			
10	**Mode of Delivery:**	Regular			
11	**Location of Teaching the Course:**	University Campus			
12	**Prepared by:**				
13	**Date of Approval:**	2022-2023			

II. Course Description:

This course provides an in-depth look at the diagnosis and management of advanced hematologic malignancies. Topics covered include the pathophysiology, clinical presentation, diagnosis, and treatment of acute leukemia, chronic leukemia, lymphoma, myeloma, and other hematologic malignancies. Students will also learn about the role of supportive care in the management of hematologic malignancies.

III. Alignment Course Intended Learning Outcomes with program outcomes

	III. Course Intended Learning Outcomes (CILOs)	Referenced PILOs
A. Knowledge and Understanding: ***Upon successful completion of the course, students will be able to:***		
a1	Understand the classification, causes, pathophysiology, clinical features, laboratory diagnosis and treatment of hematologic malignancie	**A1**
B. Intellectual Skills: ***Upon successful completion of the course, students will be able to:***		
b1	Interpret the clinical and laboratory information to understand and classify different types of hematologic malignancie	**A1**
C. Professional and Practical Skills: ***Upon successful completion of the course, students will be able to:***		
c1	Evaluate the latest research in the hematologic malignancie	**C1**
D. Transferable Skills: ***Upon successful completion of the course, students will be able to:***		
d1	Communicate effectively about the diagnosis and management of hemostasis and thrombosis with patients, families, and other healthcare professionals	**D1**

IV. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods :			
(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	Understand the classification, causes, pathophysiology, clinical features, laboratory diagnosis and teatment of hematologic malignancie	Lecture	Exam
(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1	Interpret the clinical and laboratory information to understand and classify different types of hematologic malignancie	Lecture	Exam
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	Evaluate the latest research in the hematologic malignancie	Lecture Discussion Presentation	Exam Discussion Presentation
(D Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1	Communicate effectively about the diagnosis and management of hemostasis and thrombosis with patients, families, and other healthcare professionals	Lecture Discussion Presentation	Exam Discussion Presentation

Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes
1	Overview of Hematological Malignancies:.	An introduction to the different types of hematological malignancies, including acute and chronic leukemias, lymphomas, and multiple myeloma	2	4	a1,b1,c1,d1
2	Pathophysiology of Hematological Malignancies:	A detailed examination of the genetic and molecular mechanisms underlying the development and progression of hematological malignancies.	3	6	a1,b1,c1,d1
3	Diagnosis of Hematological Malignancies:	A review of the clinical presentation, diagnostic evaluation, and staging of hematological malignancies, including bone marrow biopsy, flow cytometry, cytogenetics, and imaging studies.	1	2	a1,b1,c1,d1
4	Treatment of Acute Leukemias:	An examination of the current treatment approaches for acute myeloid leukemia and acute lymphoblastic leukemia, including chemotherapy, stem cell transplantation, and targeted therapies.	3	6	a1,b1,c1,d1
5	Treatment of Chronic Leukemias:	A discussion of the treatment options for chronic myeloid leukemia and chronic lymphocytic leukemia, including tyrosine kinase inhibitors, monoclonal antibodies, and stem cell transplantation.	2	4	a1,b1,c1,d1
6	Treatment of Lymphomas:	An overview of the treatment strategies for Hodgkin lymphoma and non-Hodgkin lymphoma, including chemotherapy, radiation therapy, immunotherapy, and stem cell transplantation.	2	4 4	a1,a2,b1,c3,d1

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		A discussion of the treatment		4	a1,b1,c1,d1
7	Treatment of Multiple Myeloma:	options for multiple myeloma, including chemotherapy, immunomodulatory drugs, proteasome inhibitors, and stem cell transplantation.	2		
8	Supportive Care:	An examination of the supportive care measures used to manage the complications of hematological malignancies and their treatment, including infection prophylaxis, transfusion support, and symptom management.	2	4	a1,b1,c1,d1
9	Emerging Therapies:	A review of the emerging treatment approaches for hematological malignancies, including immunotherapy, targeted therapies, and gene therapy.	2	4	a1,b1,c1,d1
10	Case Studies:	Application of the principles learned in the course to real-life cases, including diagnosis and treatment plans.	2	4	a1,b1,c1,d1
7	Final exam		1	2	a1,b1,c1,d1
Number of Weeks /and Units Per Semester			16	**32**	

- Acute leukemia

V. Teaching Strategies of the Course:	
1-	Lectures
2-	Practical session
3-	Self leaning
4-	**Group discussion**
	Case study analysis

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VI. Assessment Methods of the Course:	
No	**Assignment**
1	**Written Exams (Essays) and Quizzes**
2	Structured Oral Exams
4	Objective Structured Practical Exams (OSPE)
5	Student presentation
6	Case study analysis

VII. Assignments:

No.	Assignments	Week Due	Mark	Proportion of Final Assessment	Aligned CILOs (symbols)
2	**Activity**	Throughout the semester	10	10%	a1,b1,c1,d1
3	Practical Report	Throughout the semester	10	10 %	a1,b1,c1,d1
4	**Practical exam**	12	20	20%	a1,b1,c1,d1
5	**Final Exam**	14	60	60%	a1,b1,c1,d1
Total					

X. Learning Resources:	
· *Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).*	
1- Required Textbook(s) (maximum two).	
1-	Basic Principles and Practice , 2017 by Ronald Hoffman et al.
2-	Williams Hematology ,2010 ,by Kenneth Kaushansky et al.
2- Essential References.	
1-	Clinical Hematology, Theory and Procedures by Mary Louise Turgeon 2018 .
2-	Clinical Principles and Applications by Bernadette F. Rodak and George A. Fritsma.
3- Electronic Materials and Web Sites *etc*.	
1-	The American Society of Hematology website www.hematology.org
2-	The National Institutes of Health, National Heart, Lung, and Blood Institute Website www.nhlbi.nih.gov
3-	The World Health Organization website (www.who.int)
4-	The Centers for Disease Control and Prevention website (www.cdc.gov)
5	Medscape Hematology (www.medscape.com/hematology)
6	Blood Journal (www.bloodjournal.org)

XI. *Course Policies:*	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** -If the student dose not attend for more than 6 times, the student will be obligated to withdrew from the course
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration