



Faculty of Medicine Quality Assurance Unit

Master (MSC) Degree Program and Courses Specifications for Clinical Haematology

(According to currently applied credit points bylaws)

Internal Medicine Dept. Faculty of medicine Assiut University 2021-2022

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Assiut University Faculty of Medicine Quality Assurance Unit (QAU)

Master degree of Clinical Haematology

A. Basic Information

- Program Title: Clinical Haematology
- **Whature of the program: Single.**
- **Responsible Department: Internal Medicine Dept.**
- Program Academic Director (Head of the Department):

Pr. Dr Mohamed Elyamany

Coordinator (s): Principle coordinator:

- Dr. Safa Abd Elstar

Assistant coordinator (s)

- Prof .Osama Ibrahim

- Prof. Howedia Nafady
 - Dr. Safinaz Husein
- Internal evaluators: Prof. Dr. Mohammad Abas El Masry , Dr. Mohamed Abo Zaid & Dr. Samir Kamal
- External evaluators:): Prof. Dr. Mohammad A. Mosa (Ain Shams Univ.)& Omar A. Fahmi (Cairo Univ.).
- Date of Approval by the Faculty of Medicine Council of Assiut University: 23 / 9 / 2014
- Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University: 27 / 11 / 2022
- Total number of courses: 7 courses + 1 Elective course

B. Professional Information

1- Program aims

I/1 The overall aim is to enable the student to acquire the skills and knowledge to provide good care for patients in haematology ward and outpatient clinic.

1/2. To enable the students to cooperate with colleagues in other medical and surgical specialties.

1/3 To be able to understand and properly use the hematological laboratory tests.

2-Intended learning outcomes (ILOs) <u>for the whole program</u>:

2/1Knowledge and understanding:

- A. Explain the essential facts and principles of relevant basic sciences including physiology, biochemistry, pathology, Pharmacology, clinical pathology 1, microbiology and immunology & related to Clinical Haematology.
- B. Mention <u>essential facts</u> of clinically supportive sciences including Internal Medicine related to hematology, Clinical Hematology 1 (Introduction to Blood diseases).
- C. Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment the common diseases and situations related to Clinical Haematology.
- D. Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment of common diseases related to Clinical Haematology..
- E.Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to the Clinical Haematology.

- F. Mention the basics and standards of quality assurance to ensure good clinical practice in the field of Clinical Haematology.
- G. Mention the ethical and scientific principles of medical research methodology.
- H. State the impact of common health problems in the field of Clinical Haematology on the society and how good clinical practice improve these problems.

2/2 Intellectual outcomes

A. Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of the Clinical Haematology.

B. Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to Clinical Haematology.

C. Design and /or present a case or review (through seminars/journal clubs..) in one or more of common clinical problems releveant to the Clinical Haematology.

D. Formulate management plans and alternative decisions in different situations in the field of the Clinical Haematology.

2/3 Skills

2/3/1 Practical skills (Patient Care)

A. Obtain proper history and examine patients in caring and respectful behaviors.

B. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to Clinical Haematology.

C. Carry out patient management plans for common conditions related to Clinical Haematology.

D. Use information technology to support patient care decisions and patient education in common clinical situations related to Clinical Haematology.

E. Perform competently non invasive and invasive procedures considered essential for the Clinical Hematology.

F. Provide health care services aimed at preventing health problems related to Clinical Haematology.

G. Provide patient-focused care in common conditions related to Clinical Haematology. while working with health care professionals, including those from other disciplines

H. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)

2/3/2 General skills

Including:

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

- A. Perform practice-based improvement activities using a systematic methodology (share in audits **and risk management activities** and use logbooks).
- B. Appraises evidence from scientific studies.

- C. Conduct epidemiological Studies and surveys.
- D. Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.
- E. Facilitate learning of students and other health care professionals including their evaluation and assessment.

Interpersonal and Communication Skills

F. Maintain therapeutic and ethically sound relationship with patients.

- G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.
- H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.
- I. Work effectively with others as a member of a health care team or other professional group.

Professionalism

- J. Demonstrate respect, compassion, and integrity; aresponsiveness to the needs of patients and society
- K. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices
- L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Systems-Based Practice

- M. Work effectively in relevant health care delivery settings and systems including good administrative and time management.
- N. Practice cost-effective health care and resource allocation that does not compromise quality of care.
- O. Assist patients in dealing with system complexities.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for master degree in clinical haematology

Assiut Faculty of Medicine developed master degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program. These standards were approved by the Faculty Council on 17-6- 2009. These standards were approved by the Faculty Council on 17-6- 2009. These standards were revised and approved without changes by the Faculty Council on 23-9-2014. These standards were re-revised and approved without changes by the Faculty Council on 27-11-2022.

4- Program External References (Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education).

http://www.acgme.org/acWebsite/navPages/nav_Public.asp 2.Joint Royal Colleges of Physicians Training Board (MAY 2007), (<u>http://www.gmc/uk.org/Haematology 3 Jul 07 v.Curr 0017.</u> pdf 30541824).

The training programs is similar to that approved by Royal Colleges of Physicians Training Board (MAY 2007) regulations

5. Program Structure and Contents

A. Duration of program: 3 – 5 years

B. Structure of the program:

Total number of credit point: 180 (20 out of them for thesis)

Didactic 40 (22.2 %), practical 120 (66.7 %), thesis 20 (11.1%) total 180 First part Didactic 14 (35 %), practical 24 (60 %), elective course 2 CP (5%), total 40 Second part Didactic 24, (20% %) practical 96 (80 %) total 120 According the currently applied credit points bylaws: Total courses 160 credit point `` Compulsory courses: 98.75% Elective course : 2 credit point =1.25%

	Credit points	% from total
Basic science courses	24	13.3%
Humanity and social courses	2	1.1%
Speciality courses	134	74.5%
Others (Computer,)		
Field training	120	66.7%
Thesis	20	11.1%

C. Program Time Table

A. Duration of program 3 years maximally 5 years divided into

• Part 1: (One year)

Program-related basic science courses and ILOs Students are allowed to sit the exams of these courses after 12 months from applying to the MSc degree.

One elective course can be set during either the 1st or 2nd parts.

o Thesis

For the M Sc thesis;

MSc thesis subject should be officially registered within 6 months from application to the MSc degree,

Discussion and acceptance of the thesis could be set after 12 months from registering the MSc subject;

It should be discussed and accepted before passing the second part of examination)

• Part 2 (2 years)

Program –related speciality courses and ILOs

Students are not allowed to sit the exams of these courses before 3 years from applying to the MSc degree.

The students pass if they get 50% from the written exams and 60% from oral and clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course

Total degrees 1900 marks.

700 marks for first part

1200 for second part

Written exam 40% - 70%.

Clinical /practical and oral exams 30% - 60%.

4D-courses of the program:

Courses and student work	Course	Core CREDIT POINTs		
load list	Code	Lectures	Training	Total
First Part				
Basic science courses (8CP)				
Course 1: Physiology and	BLO218A#			2
Biochemistry		1		
1) Unit 1 Physiology		1		
1) Unit 2 Biochemistry	BLO218B#	1		2
Course 2: Pharmacology &				2
Pathology		1		
2) Unit 2 Pathology		1		
Course 3: Microbiology	BLO207	2		2
& immunology				
Course 4: Clinical pathology 1	BLO231	2		2
General clinical compulsory				
courses (6 points)		_		_
Course 5. Internal Medicine	BLO218C	5		5
related to hematology.				
Course 6. Clinical Hematology	BLO218D	1		1
1 (Introduction to Blood				
diseases)				
Elective courses*		2CP)	

Clinical training and scientific				
activities:				
Clinical training in General				
Clinical compulsory courses				10
(10 CP)				
Course 5. Internal Medicine	BLO218C		8	
related to hematology.				
Course 6. Clinical Hematology	BLO218D		2	
1 (Introduction to Blood	DECEIOD			
diseases)				
Clinical training and scientific			14	14
activities in Speciality course				
(14 CP)				
Total of the first part		16	24	40
Second Part	Speciality courses 24 CP			
	Specia	lity Clinic	al Work S	96 CP
Speciality Courses	BLO218E#			
<u>Course7:</u> Clinical		24		24
Hematology 2	DL 0010E#			
Training and practical	BLO218E#			
activities in Speciality (96 CP)			96	96
Clinical Hematology 2				
Total of the second part		24	96	120
Thesis	20 CP			
Total of the degree	180			

* Elective courses can be taken during either the $1^{\mbox{\scriptsize st}}$ or $2^{\mbox{\scriptsize nd}}$ parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Medical statistics.
- Evidence based medicine.

- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- Quality assurance of medical education
- Quality assurance of clinical practice.
- o Hospital management

One of the above mentioned courses are prerequisites for fulfillment of the degree.

Thesis:

20 CP are appointed to the completion and acceptance of the thesis.

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module

7-Admission requirements

Admission Requirements (prerequisites) if any :

I. General Requirements:

a. MBBCh Degree from any Egyptian Faculties of Medicine

b. Equivalent Degree from medical schools abroad approved by the Ministry of Higher Education

II. Specific Requirements:

- Fluent in English (study language)

VACATIONS AND STUDY LEAVE

The current departmental policy is to give the resident two weeks before examination.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- Examinations of the first part could be set at 12 months from registering to the MSc degree.
- Examination of the second part cannot be set before 3 years from registering to the degree.
- Discussion of the MSc thesis could be set after 1 year from officially registering the MSc subject before setting the second part exams.
- **W** The minimum duration of the program is 3 years.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and Speciality courses of this program as regulated by the post graduates approved rules by the faculty council.

- 2. Completing all scheduled CP and log book (minimum 80%).
- 3. Discussion and acceptance of the MSc_thesis.

Method	ILOs measured
Written examinations:	K & I
Structured essay questions	
Objective questions:	
MCQ	
Problem solving	
Clinical:	K ,I, P &G skills
Long/short cases	
OSCE	
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills

9- Program assessment methods and rules (Annex IV)

Weighting of assessments:

Courses		Degrees			
	Course	WrittenOralPractical / ClinicalTotal			Total
	code	Exam	Exam*	Exam	
First part					
Course 1:		`			
Physiology and	BLO218A#				
Biochemistry					
Unit 1			•		-
Physiology		20	30	-	50
Unit 2		20	20		50
Biochemistry		20	30	-	50
Course 2:	BLO218B#				
Pharmacology &					
Pathology		20	20	-	50
Unit I Dharmaaalaay		20	30		50
Unit 2 Pathology		20	20	10	50
Course 3:	BL 0207	40	30	30	100
Microbiology	BL0207	-0	50	50	100
& immunology					
Course4:	BLO231	40	40	20	100
Clinical					
pathology 1					
Course 5.		150	30	70	250
Internal Medicine	BLO218C.				
related to					
hematology.					
Course6. Clinical		30	10	10	50
Hematology 1	BLO218D				
(Introduction to					
Blood diseases)					
Total of the first					700
part					
		Secor	nd Part		
Speciality Course	S:		• • • •	400	
Course7: Clinical	(BLO218E#)		200	400	
Hematology 2					

Paper 1Clinical	150	شفوي		
haematology 2		واشعة		
Paper2 Clinical	150	وعينات		
haematology 2		وكراسة		
Paper 3Clinical	150	انشطة		
haematology 2				
[haematology				
related to internal				
medicine]				
Paper 4Clinical	150			
haematology 2	توضيع هيذة			
[Advanced	الورقة بالمساركة			
clinical pathology	امــراض الــدم			
2+ problem	المعملية وبنك			
solving + MCQ]	الــــدم بقســــم			
	البالولو جبيبيي الإكلينيكية			
Total	600	200	400	1200
Elective course	50		50	100

* 25% of the oral exam for assessment of logbook

700 marks for first part

1200 for second part

Written exam 50% (600 marks).

Clinical /practical and oral exams 50% (600 marks)

4 Examination system:

- > First part:
- Written exam 3 hours in Physiology + Biochemistry + Oral exam
- Written exam 1 hour in Pharmacology &Pathology+ Oral exam
- Written exam 2 hours in Microbiology and immunology + Oral exam
 - Written exam 2 hours in Clinical pathology 1 + Oral exam + practical exam
 - Written exam 1 hours in Clinical hematology 1+ Oral exam
 - Written exam 3 hours in Internal Medicine + Oral exam+ Clinical exam

> Second part:

• Written exam 4 papers 3 hours for each in Clinical Haematology 2 + Oral exam+ Clinical exam

Elective courses

• Written exam one paper 1 hour in Elective course + Oral & Practical exam

10-Program evaluation

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator	Reports	#
(s):According to department	Field visits	
council		
External Examiner (s):		
According to department		
council		
Stakeholders	Reports	#
	Field visits	
	Questionnaires	
Senior students	Questionnaires	#
Alumni	Questionnaires	#

#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.

All course specifications for this program are in place.

Contributor	Name	Signature	Date
 Program Principle Coordinator: 	Dr. Safa Abd Elstar Assistant: Dr. Safenaz Hussien		
Head of the Responsible	Prof .Mohamed		
Department (Program Academic	Elyamany		
Director):			

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses/

Course 1 Physiology and biochemistry

Course 1 Unit 1(Physiology)

1. Unit data

- Unit title : Physiology
- **4** Unit code: BLO218A#
- Specialty : Clinical Haematology
- Number of credit point: Didactic 1, (100%) practical 0 (0%) total 1
- Department (s) delivering the course: physiology in conjunction with Clinical Haematology.
- Coordinator (s): Staff members of physiology Department in conjunction with internal medicine Department as annually approved by both departments councils
- Date last reviewed: 9 / 5 / 2022
- Requirements (prerequisites) if any :
 - **4** None

2. Unit Aims

-The student should acquire the facts of physiology necessary for clinical hematology in clinical reasoning, diagnosis and management.

	3. Intended learni	ing outcomes (ILOs):			
	A-Knowledge and understanding				
ILOs		Methods of teaching/ learning	Methods of Evaluation		
A. Describe Physiology o Physiology o Physiology o Physiology o Physiology o	Physiologic Principles of of blood and haemostasis. of Cardiovascular system. of Respiratory system. of Liver and GIT system. of Kidney. of endocrine system.	-Lectures	-Written and oral examination - Log book		
B-Intellectual outcomes					
ILOs		Methods of	Methods of		

ILOS	teaching/ learning	Evaluation
A. Correlates the facts of <i>physiology</i> with clinical reasoning, diagnosis and management of common diseases related to Clinical Haematology	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book

C- Practical skills = 0 credit points

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A-Use information technology to manage	-Observation	Oral Exam
information, access on-line medical information;	and	Logbook
and support their own education	supervision	
	-Written and	
	oral	
	communication	

Interpersonal and Communication Skills

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
B. Write a report in common condition mentioned	-Observation	Oral Exam
in A.A	and	Logbook
	supervision	Check list
	-Written and	
	oral	
	communication	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	3600 global rating

Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Physiology of blood and hemostasis.	A	А	-	A-D
Physiology of Cardiovascular system.	A	A	-	A-D
Physiology of Respiratory system.	A	A	-	A-D
Physiology of Liver and GIT system.	A	А	-	A-D
Physiology of Kidney.	А	А	-	A-D
Physiology of endocrine system	A	A		

5. Course Methods of teaching/learning:

- 1. Didactic (lectures, seminars, tutorial)
- 2. Observation
- 3. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- 1. Extra Didactic (lectures, seminars, tutorial) according to their needs
 - 7. Course assessment methods:

i. Assessment tools:

- 1. Written and oral examination
- 2. Log book
- ii. Time schedule: At the end of the first part
- iii. Marks: 50

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies
- ii. Essential books
 - Medical physiology (Guyton and Hall)
 - Ganong's Review of medical physiology
- iii. Recommended books

iv. Periodicals, Web sites, ... etc

American Journal of internal Medicine BMJ

NEJIM

v. others None

Course 1 Unit 2 Biochemistry

- **Unit2:** Biochemistry
- Unit code: BLO218A#
- Speciality : Clinical Haematology
- Number of credit point: Didactic 1 (100%) practical 0(0%) total 1.
- Department (s) delivering the course: Biochemistry in conjunction with Internal Medicine department.
- Coordinator (s): Staff members of Biochemistry
 Department in conjunction with internal medicine
 Department as annually approved by both departments
 councils
- **4** Date last reviewed: 9/5/2022
- Requirements (prerequisites) if any :None

2. Unit Aims

-The student should acquire the facts of biochemistry necessary for Clinical Hematology in clinical reasoning, diagnosis and management of systemic diseases.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe details of Biochemistry of:	-Lectures	-Written
 Cell Biology and biomarkers 		and oral
 Nutrition and deficiency disorders 		examination
 Enzyme deficiency disorders 		- Log book
 Metabolic hematology disorders 		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
 A. Correlates the facts of <i>Biochemistry</i> with	Didactic	-Written
clinical reasoning, diagnosis and management	(lectures,	and oral
of common diseases related to Internal	seminars,	examination
Medicine.	tutorial)	-Log book

A-Practical skills = 0 credit point

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/learning	Evaluation
A-Use information technology to manage	-Observation and	Oral Exam
information, access on-line medical	supervision	Logbook
information; and support their own education	-Written and oral	
	communication	

Interpersonal and Communication Skills

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
B. Write a report in common condition mentioned	-Observation	Oral Exam
in A.A	and	Logbook
	supervision	Check list
	-Written and	
	oral	
	communication	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in relevant health care delivery	-Observation	360o global
settings and systems.	-Senior staff	rating
	experience	

Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
 Cell Biology and biomarkers 	A	A	-	A-D
 Nutrition and deficiency disorders 	A	A	-	A-D
 Enzyme deficiency disorders 	A	A	-	A-D
 Metabolic hematology disorders 	A	A	_	A-D

5. Course Methods of teaching/learning:

- 1. Observation
- 2. Didactic (lectures, seminars, tutorial)
- 3. Written & oral communication
- 4. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs

7. Course assessment methods:

i. Assessment tools:

- 1. Written and oral examination
- 2. Log book
- ii. Time schedule: At the end of the first part
- iii. Marks: 50

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies
- ii. Essential books Kaplan's

iii. Recommended books

Synopsis of Biochemistry

Lippincott's illustrated Review: Biochemistry

iv. Periodicals, Web sites, American Journal of internal

Medicine, BMJ and NEJIM

v. others

9. Signature		
Course Coordinator		
Unit 1 Coordinator: Head of the Department:		
Prof. Safinaz Hussein Prof. Mohamed Elyamany		
Date:	Date:	
Unit 2 Coordinator: Prof. Hanan	Head of the Department: Prof. Mohamed Elvamany	
Date:	Date:	

Course 2 (Pharmacology and Pathology)

Course 1 Unit 1 Pharmacology

- Unit title : Pharmacology
- Unit code: BLO218B#
- Speciality : Clinical Haematology
- Number of Credit points : Didactic 1 (100%) practical 0(0%) total 1.
- Department (s) delivering the course: Pharmacology
- **in conjunction with Internal Medicine department.**
- Coordinator (s): Staff members of Pharmacology
 Department in conjunction with internal medicine
 Department as annually approved by both departments
 councils
- **4** Date last reviewed: 20 / 9 / 2017
- **Requirements (prerequisites) if any :None**

2. Unit Aims

-The student should acquire the facts of Pharmacology necessary for Clinical Hematology in clinical reasoning, diagnosis and management of Clinical Hematology diseases.

3. Intended learning outcomes (ILOs):		
A-Knowledge and	understanding	5
ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A. Describe Principals of:	-Lectures	-Written
-Pharmacology of Anaemia, Iron, folic acid and B12		and oral
supplementation		examination
-Outline the mechanisms of action of pharmacological		- Log book
platelet inhibitors		
 Pharmacological and nonpharmacological clotting 		
inhibitors		
-Drugs causing BM suppression and immunosuppressants		
-Cancer chemotherapy for haematological malignancies		
B- Describe <i>details of:</i>		
-Hemoglobinopathies and use of Hydroxyurea		
 Hemolytic Disorders: Drug-Induced Hemolytic Anemia 		
Medications in G6PD Deficiency		
 Medication Causes of Neutropenia 		
-Medication Causes of Lymphadenopathy		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of <i>Pharmacology</i> with	Didactic	-Written
clinical reasoning, diagnosis and management	(lectures,	and oral
of common diseases related to Clinical	seminars,	examination
Haematology.	tutorial)	-Log book

C-Practical skills = 0 credit point

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/	Methods of Evaluation
	learning	0.15
A-Use information technology to manage	-Observation	Oral Exam
information, access on-line medical information;	and	Logbook
and support their own education	supervision	
	-Written and	
	oral	
	communication	
Interpersonal and Communica	tion Skills	
ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
B. Write a report in common condition mentioned	-Observation	Oral Exam
in A.A	and	Logbook

	supervision -Written and oral	Check list
	communication	
Professionalism		

ILOs	Methods of teaching/ learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff	360o global rating
	experience	_

Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Pharmacology of Anaemia, Iron, folic acid and B12 supplementation	A	A	-	A-D
Outline the mechanisms of action of pharmacological platelet inhibitors	A	A	-	A-D
 Pharmacological and nonpharmacological clotting inhibitors 	A	A	-	A-D
Drugs causing BM suppression and immunosuppressants	А	А	-	A-D
Cancer chemotherapy for haematological malignancies	В	А		A-D
-Hemoglobinopathies and use of Hydroxyurea	В	А		A-D
- Hemolytic Disorders: Drug- Induced Hemolytic Anemia	В	А		A-D
Medications in G6PD Deficiency	В	А		A-D
- Medication Causes of Neutropenia	В	A		A-D
-Medication Causes of Lymphadenopathy	В	A		A-D

5. Course Methods of teaching/learning:

- 1. Observation
- 2. Didactic (lectures, seminars, tutorial)
- 3. Written & oral communication
- 4. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs

7. Course assessment methods:

i. Assessment tools:

- 3. Written and oral examination
- 4. Log book
- ii. Time schedule: At the end of the first part
- iii. Marks: 50

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books Book of the department of pharmacology

iii. Periodicals, Web sites, American Journal of internalMedicine, BMJ and NEJIMiv. others

Course 2 unit 2 Pathology

Unit data

- 4 Unit Title: Pathology
- **Unit code: BLO218B#**
- **4** Speciality is Clinical Haematology
- Number of Credit points: Lectures 1.6 (80%), practical
 0.4 (20%).total 2
- Department (s) delivering the Unit: Pathology in conjunction with internal medicine
- Coordinator (s): Staff members of Pathology Department in conjunction with Internal medicine Department as annually approved by both departments councils Date last reviewed: 9 / 5 / 2022
- Requirements (prerequisites) if any :

None

2. Course aims

The student should acquire the pathological facts necessary for Internal medicine and clinical haematology.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
 A. Mention Principles of General Pathology of: Thrombosis and embolism Inflammation Immunity & hypersensitivity. Tuberculosis & Bilharziasis Pathology of tumors 	-Lectures	-Written and oral examination - Log book
 B-Describe Pathologic Details of: Bone marrow diseases & interpret BM trephine biopsy Lymphomas (Hodgkins' Disease and NHL) Granulomas including TB lymphadenopathy Introduction to immuno-histochemistry Diagnostic cytology 	-Lectures	-Written and oral examination - Log book

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Pathology with clinical reasoning, diagnosis and management of common diseases related to clinical haematology.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Master of basic skills in the pathology of diseases related to clinical haematology.	-Laboratory work	-Assessment of practical skills -Log book
B. Use information technology to support decisions in common situations related to pathology of the clinical haematology diseases.		
C. Examine Pathological slides of common clinical hematology diseases as mentioned in A.A and A.B.		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A-Use information technology to manage	-Observation and	Oral Exam
information, access on-line medical information;	supervision	Logbook
and support their own education	-Written and oral	
	communication	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B. Write a report in common	-Observation and supervision	Oral Exam
condition mentioned in A.A and	-Written and oral	Logbook
A.B.	communication	Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Logbook

Systems-Based Practice

360o global f rating
1
4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
	A	В	C	D
<u>General Pathology</u>				
Thrombosis and embolism	A	A	A-C	A-D
- Inflammation	A	A	A-C	A-D
- Immunity & hypersensitivity.	Α	A	A&B	A-D
- Tuberculosis & Bilharziasis	A	A	A-C	A-D
- Pathology of tumors	A	A	A-C	A-D
Pathologic details of:				
Bone marrow diseases & interpret BM trephine biopsy	В		A-C	A-D
-Lymphomas (Hodgkins' Disease and NHL)	В	A	A-C	A-D
-Granulomas including TB lymphadenopathy	В	A	A-C	A-D
-Introduction to immuno- histochemistry	В	A	A&B	A-D
Diagnostic cytology	В	A	A-B	A-D

5. Course Methods of teaching/learning:

- a. Observation and supervision
- b. Didactic (lectures, seminars, tutorial)
- c. Laboratory work
- d. Written & oral communication
- e. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- 1. Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2. Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools:

- 1. Written and oral examination
- 2. Assessment of practical skills)
- 3. Log book
- ii. Time schedule: At the end of the first part
- iii. Marks: 50

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

• Kaplan's

iii. Recommended books

Robbins and Cotran's Pathologic basis of diseases Robbin's Basic Pathology

iv. Periodicals, Web sites, ... etc

www.biomedcentral.com

v. others

None

9. Signature		
Course Coordinator		
Unit 1 Coordinator:	Head of the Department:	
DR. Hanan Said Prof. Mohamed Elyamany		
Date:	Date:	
Unit 2 Coordinator:	Head of the Department:	
Dr. Abeer Refaiy	Prof. Mohamed Elyamany	
Date:	Date:	

Course 3 Microbiology and Immunology

1. Course data

- Course Title: Microbiology
- **Course code:** BLO207
- **4** Speciality is Clinical haematology.
- Number of Credit points: Lectures 1.4 (70%), practical
 0.6 (30%).total 2

Department (s) delivering the course: Microbiology in

conjunction with Internal medicine

4 Coordinator (s): Staff members of Microbiology

Department in conjunction with Internal medicine

Department as annually approved by both departments

councils

Date last reviewed: 9 / 5 / 2022

Requirements (prerequisites) if any :

None

2. Course aims

The student should acquire the facts of microbiology necessary for clinical haematology.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
 A. Describe Principles of : General bacteriology Tuberculosis General virology Hepatitis viruses Viruses inducing haematological diseases (HIV, CMV, EBV, Parvo virus) Common systemic fungal infections B- Describe Details of : Immune reaction and autoimmunity Infections in immune deficient patients HLA typing and stem cell transplantation 	-Lectures -	-Written and oral examination - Log book
 B- Describe Details of : Immune reaction and autoimmunity Infections in immune deficient patients HLA typing and stem cell transplantation 		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Microbiology with clinical reasoning, diagnosis and management of common diseases related to clinical haematology	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Master the basic skills in the microbiology related to clinical haematology.	-Laboratory work	-Assessment of practical skills -Log book
B. Use information technology to support decisions in common situations related to microbiology related to clinical haematology.		
C. Identify Pathogens of common infection in Internal Medicine and clinical haematology by examining slides under the microscopy.		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A-Use information technology to manage	-Observation	Oral Exam
information, access on-line medical information;	and	Logbook
and support their own education	supervision	
	-Written and	
	oral	
	communication	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned	-Observation	Oral Exam
in A.A and A.B.	and	Logbook
	supervision	Check list
	-Written and	
	oral	
	communication	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff	3600 global rating
	experience	

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
4 General bacteriology				
 General bacteriology 	A	A	A&B	A-D
 Tuberculosis 	A	A	A-C	A-D
 General virology 				
 Hepatitis viruses 	А	А	A&B	A-D
 Viruses inducing haematological diseases (HIV, CMV, EBV, Parvo virus) 	A	A	A&B	A-D
 Common systemic fungal infections 	A	A	A&B	A-D
 Infections in immune deficient patients 	A	A	A-C	
 Immune reactions and autoimmunity 	A	A	A&B	A-D
HLA typing	A	A	A&B	A-D

5. Course Methods of teaching/learning:

- 1. Didactic (lectures, seminars, tutorial)
- 2. Laboratory work
- 3. Observation and supervision
- 4. Written & oral communication
- 5. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2. Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools:

- 1- Written and oral examination
- 2- Assessment of practical skills)
- 3- Log book

ii. Time schedule: At the end of the first part

iii. arks: 100

8. List of references

i i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies
- **ii. Essential books** Kaplan's Synopsis of microbiology
- iii. Recommended books
- iv. Periodicals, Web sites, ... etc www.ASM.org
- v. others : None

9. Signature			
Course Coordinator			
Course Coordinator: Prof. Enas	Head of the Department:		
Abd El Megeed	Prof. Mohamed Elyamany		
Date:	Date:		

Course 4 Clinical pathology 1

- Course Title: Clinical pathology 1
- **Course code: BLO231**
- Speciality is Clinical Haematology
- Number of credit points : Lectures 1.6 (80%), practical
 0.4 (20%).total 2.

Department (s) delivering the course: clinical pathology in conjunction with Internal medicine department

- Coordinator (s): Staff members of clinical pathology
 Department in conjunction with Internal medicine
 Department as annually approved by both departments
 councils
 Date last reviewed: 9 / 5 / 2022
- Requirements (prerequisites) if any : None

2. Unit Aims

The student should acquire the facts of clinical pathology necessary for Clinical Haematology.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
 A. Describe Principles of clinical pathology of : Making and staining of a peripheral blood film Setting up the use of a light microscope Analysis and interpretation of blood films and differential white blood cell count and red blood cell abnormalities Interpretation of bone marrow aspirate Diagnosis of malignant haematological disorders Aplastic Anaemia and myelodysplastic syndromes Interpretation of the results of Platelet function tests, haemostasis and cross matching Interpretation of clinical chemistry reports Introduction to flow-cytometry 	-Lectures -Laboratory work	-Written and oral examination - Log book

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of clinical pathology with clinical reasoning, diagnosis and management of common diseases related to clinical haematology.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Master the basic skills in clinical pathology	Laboratory	-Assessment
related to clinical haematology.	work	of practical
		skills
		-Logbook
B-Use information technology to support decisions		
related to clinical haematology.		
C. Identify common problems of clinical haematology		
by doing biochemical tests, microscopic		
examination and Training on blood film of blood		
components, bone marrow aspirate.		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A-Use information technology to manage	-Observation and	Oral Exam
information, access on-line medical	supervision	Logbook
information; and support their own education	-Written and oral	
	communication	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B. Write a report in common	-Observation and supervision	Oral Exam
condition mentioned in A.A and	-Written and oral	Logbook
A.B.	communication	Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in relevant health care delivery	-Observation	360o global
settings and systems.	-Senior staff	rating
	experience	

4-Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
 Making and staining of a peripheral blood film 	A	A	A-C	A-D
 Setting up the use of a light microscope 	A	A	A & B	A-D
 Analysis and interpretation of blood films and differential white blood cell count and red blood cell abnormalities 	A	A	A - C	A-D
 Interpretation of bone marrow aspirate 	A	A	A -C	A-D
 Diagnosis of malignant haematological disorders 	A	A	A - C	A-D
 Aplastic Anaemia and myelodysplastic syndromes 	A	A	A - C	A-D
 Interpretation of the results of Platelet function tests, haemostasis and cross matching 	A	A	A & B	A-D
 Interpretation of clinical chemistry reports 	A	A	А ,В	A-D
 Introduction to flow- cytometry 	A	A	A & B	A-D

5. Course Methods of teaching/learning:

- 1 Laboratory work
- 2 Didactic (lectures, seminars, tutorial
- 3 Observation and supervision
- 4 Written & oral communication
- **5** Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- 1. Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2. Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools:

- 4- Written and oral examination
- 5- Assessment of practical skills)
- 6- Log book
- **ii. Time schedule:** At the end of the first part
- iii. Marks: 100

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

Crocker: The science of laboratory diagnosis Harr: clinical laboratory Science Review

iii. Recommended books

Tietz textbook of clinical chemistry and molecular

diagnosis

iv. Periodicals, Web sites, ... etc

www.biomedcentral.com

v. others

None

9. Signature		
Course Coordinator		
Course Coordinator:	Head of the Department:	
Prof. Azza Mostafa Prof. Mohamed Elyamany		
Date:	Date:	

Course 5 Internal Medicine related to Haemtology

Name of department: Internal Medicine, Clinical Haematology Unit

- Faculty of medicine
- Assiut University
- **2021--2022**

1. Course data

- **Gourse Title:** Internal Medicine related to Haemtology
- **Course code:** BLO218C
- **Speciality:** Clinical Haematology
- Number of credit points: Didactic 5(38.5%) practical
 8(61.5%).total 13
- **4** Department (s) delivering the course: Internal Medicine
- Coordinator (s):

Course coordinator: Dr. Saffa Abd Elstar

Assistant coordinator (s) Prof Yosreia Abd el rhman, Prof

Osama Ibrahem, Prof. Howeida Nafady, Prof Ahmed Farag, Dr. Rania Hafez, Dr. Safinaz Hussein

Date last reviewed: 9 / 5 / 2022

General requirements (prerequisites) if any :

Rotation of all branches of internal Medicine

Requirements from the students to achieve course ILOs are clarified in the joining log book.

2. Course Aims

- 1. To have sufficient knowledge about different Internal Medicine diseases
- 2. To be able to communicate with the patient, his relatives and cooperate with his colleagues.
- 3. To acquire the skill to interpret the results of the diagnostic tools

3. Course intended learning outcomes (ILOs):

ILOs	Methods of teaching/ learning	Methods of Evaluation
 A. Describe the etiology, clinical picture, diagnosis and management of the following diseases and clinical conditions: 1-Cardiology A-Heart failure b- Rheumatic fever c- Valvular heart diseases D-Arrhythmia e- Hypertension f- Ischemic heart disease g- Cardiomyopathy 2-Endocrinology and nutrition and renal diseases a- Diabetes mellitus b- Thyroid diseases c- Adrenal gland diseases Renal failure Nephritis Nephrotic syndrome 	Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	OSCE at the end of each year -log book & portfolio - MCQ examination at the second year -Oral and written exam

A- Knowledge and understanding

3-Hepatology & Gastroenterology	
a- Liver cirrhosis and liver cell failure	
b- Gastritis, ileitis, colonic disorders,	
malabsorption & inflammatory bowel diseases	
c- GIT and liver in systemic disease	
d- Upper and lower GIT bleeding	
4-Collagen vascular and systemic diseases	
a. SLE	
b. RA, Sjogren Syndrome and mixed CT disease	
c. Vasculitis	
5- Pulmonary Medicine	
a. Obstructive lung diseases	
b. Restrictive lung disorders, Sarcoidosis &	
Idiopathic pulmonary fibrosis	
c. Lung in systemic diseases	
d. Pulmonary vascular disorders	
e. Pulmonary infections	
6Neurological diseases	
a- Cerebrovascular strokes	
b- Myelopathy	
c- Meningitis and encephalitis	
d-Neuropathies	
B. Mention the principles of	
(diagnostic/therapeutic/preventive tools)	
-Acid-Base & electrolyte	
a- Acidosis and alkalosis	
b- K and Na disorders	
C-disorders of Ca & Mg	
d-Imaging in internal Medicine	
e- hypo and hypervitaminosis	

C. State update and evidence based Knowledge of	
-Heart failure	
- Rheumatic fever	
Valvular heart diseases	
-Arrhythmia	
- Hypertension	
- Ischemic heart disease	
- Diabetes mellitus	
Liver cirrhosis and liver cell failure	
D. Memorize the facts and principles of the relevant	
basic and clinically supportive sciences related to	
Internal Medicine	
E. Mention the basic ethical and medicolegal	
principles revenant to the Internal Medicine	
F. Mention the basics of quality assurance to ensure	
good clinical care in Internal Medicine	
G. Mention the ethical and scientific principles of	
medical research	
H-State the impact of common health problems in	
the field of Internal Medicine on the society.	

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases related to Internal Medicine	Clinical rounds Senior staff experience	Procedure/case presentation Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations		

related to Internal Medicine	
C. Design and present cases , seminars in common problem	
D-Formulate management plans and alternative decisions in different situations in the field of the Internal Medicine	

B- Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Obtain proper history and examine patients in caring and respectful behaviors.		
B. Order the following non invasive/invasive diagnostic procedures Routine appropriate Lab investigations related to conditions mentioned in A.A -X ray chest -cardiac markers -ECG Abdominal Ultrasonography -CT abdomen -urine analysis -blood gases Stool analysis Liver function test Upper and lower GI endoscopy Measure the blood sugar. Endocrinal profile	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year
Rheumatoid factor, ANF, LE cells. Sputum culture		
- CT and MRI brain	Clinical	Procoduro
c. interpret the following from invasive/invasive	Cillical	FIOLEUUIE

diagnostic procedures	round with	presentation
-Routine appropriate Lab investigations	senior staff	- Log book
related to conditions mentioned in A.A		- Chick list
-X ray chest		
-cardiac markers		
-ECG		
Blood gases		
-kidney function test		
-Random blood sugar.		
Results of urine analysis		
Metabolic profile:[i.e. serum		
electrolytes]		
D. Perform the following non invasive/invasive	Clinical	Procedure
therapeutic procedures	round with	presentation
ECG	senior staff	- Log book
-Blood gases	-Perform	- Chick list
-CVP	under	
Blood sugar estimation	supervision	
-Urinalysis	of senior	
-Application of intravenous cannula.	staff	
-Insulin administration.		
Abdominal Paracentesis		
-Nasogastric tube and sungestaken tube		
application		
E-Prescribe Proper drug regimens for	Clinical	Procedure
GIT diseases	round with	presentation
-Abdominal paracentesis	senior staff	- Log book
		- Chick list
F. Carry out patient management plans for	Clinical	
common conditions related to Internal Medicine	round with	
	senior staff	
G. Use information technology to support patient		
care decisions and patient education in common		
clinical situations related to Internal Medicine		
H. Provide health care services aimed at		

preventing health problems related to Internal	
Medicine like Myocardial ischemia syndromes like	
chronic stable angina, acute coronary syndromes,	
coronary artery spasm ,hepatitis ,liver cirrhosis	
, diabetes and others	
I. Provide patient-focused care in common	
conditions related to Internal Medicine while	
working with health care professionals, including	
those from other disciplines	

<u>D-General Skills</u> Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology(audit, logbook)	Case log -Observation and supervision	Procedure/case presentation -Log book and Portfolios
	-Written & oral communication	
B. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
C. Conduct epidemiological Studies and surveys.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.	Clinical rounds Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain therapeutic and ethically sound relationship with patients.	Simulations Clinical round Seminars Lectures Case presentation Hand on workshops	Global rating Procedure/case presentation Log book Portfolios Chick list
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in common problems related to Internal Medicine	Clinical round Seminars	Clinical Exam
K. Write a report in -Patients medical report - Discharge report -Death report	Senior staff experience	Chick list
L. Council patients and families about Internal Medicine related diseases	Clinical round with senior staff	

ILOs	Methods of	Methods of
	teaching/ learning	Evaluation
M. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	 Objective structured clinical examination Patient survey
N. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		1. 360o global rating
O. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		 Objective structured clinical examination 3600 global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
P. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating
Q. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance

4. Course contents (topic s/modules/rotation Course Matrix (COURSE 4)

Time Schedule: Second part

Торіс	Covered ILOs			
_	Knowledge	Intellectual	Practical	General
	Α	В	skill C	Skills D
Heart failure	A,C,D-H	A-D	A-I	A-Q
Rheumatic fever	A,C,D-H	A-D	A-I	A-Q
Valvular heart diseases	A,C,D-H	A-D	A-G,I	A-Q
Arrhythmia	A-H	A-D	A-I	A-Q
Hypertension	A-H	A-D	A-I	A-Q
Ischemic heart disease	A-H	A-D	A-I	A-Q
Cardiomyopathy	A-H	A-D	A-I	A-Q
Cerebrovascular strokes	A,B, D-H	A-D	A-I	A-Q
Myelopathy	A,B, D-H	A-D	A-I	A-Q
Meningitis and encephalitis	A,B, D-H	A-D	A-I	A-Q
Neuropathies	A-H	A-D	A-I	A-Q
Diabetes mellitus	A-H	A-D	A-I	A-Q
Thyroid diseases	A,B, D-H	A-D	A-I	A-Q
Adrenal gland diseases	A,B, D-H	A-D	A-I	A-Q
Renal failure	A,B, D-H	A-D	A-I	A-Q
Nephritis	A,B, D-H	A-D	A-I	A-Q
Nephrotic syndrome	A,B, D-H	A-D	A-I	A-Q
Liver cirrhosis and liver cell failure	A-H	A-D	A-I	A-Q
Gastritis, ileitis, colonic disorders,	A,B, D-H	A-D	A-I	A-Q
malabsorption & inflammatory				
bowel diseases				
GIT and liver in systemic disease	A-H	A-D	A-I	A-Q
Upper and lower GIT bleeding	A-H	A-D	A-I	A-Q
SLE	A,B, D-H	A-D	A-I	A-Q
RA, Sjogren Syndrome and mixed	A,B, D-H	A-D	A-I	A-Q
CT disease				
Vasculitis	A,B, D-H	A-D	A-I	A-Q
Obstructive lung diseases	A,B, D-H	A-D	A-I	A-Q

Restrictive lung disorders,	A,B, D-H	A-D	A-I	A-Q
Sarcoidosis & Idiopathic				
pulmonary fibrosis				
Lung in systemic diseases	A,B, D-H	A-D	A-I	A-Q
Pulmonary vascular disorders	A,B, D-H	A-D	A-I	A-Q
Pulmonary infections	A,B, D-H	A-D	A-I	A-Q
Acidosis and alkalosis	B,D-H	A-D	A-I	A-Q
K and Na disorders	B,D-H	A-D	A-I	A-Q
disorders of Ca & Mg	B,D-H	A-D	A-I	A-Q
Imaging in internal Medicine	B,D-H	A-D	B-D	A,B
hypo and hypervitaminosis	B,D-H	A-D	A-I	A-Q

Methods of teaching/learning

- 1. Didactic (lectures, seminars, tutorial)
- 2. Outpatient
- 3. Inpatient
- 4. Case presentation
- 5. Direct observation
- 6. journal club
- 7. Clinical rounds
- 8. Clinical rotation
- 9. Senior staff experience
- **10**. Perform under supervision of senior staff
- **11**. Postgraduate teaching

6. Methods of teaching/learning: for students with poor achievements

- 1. Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2. Extra training according to their needs

7. Assessment methods

i. Assessment tools:

- 1. Oral examination
- 2. Clinical examination
- 3. Written examination
- 4. Objective structure clinical examination (OSCE)
- 5. Procedure/case Log book and Portfolios
- 6. Simulation
- 7. Record review (report)
- 8. Patient survey
- 9. 3600 global rating
- 10. Check list evaluation of live or recorded performance
- 11. MCQ Exam
- ii. Time schedule: At the end of second part
- iii. Marks: 250

8. List of references(course 4,5):

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

- 1- Cecil text book of Medicine, 22edition.
- 2- Oxford text book of Medicine,10 edition
- 3- Davidson20 edition.
- 4- Current Medical Diagnosis & treatment, 2021.

iii. Recommended books

- 1. Harrisons text book of Medicine ,15 edition
- 2. Hurst text book of cardiology
- 3. Macloid clinical methods.

iv. Periodicals, Web sites, ... etc

- American Journal of internal Medicine
- New England Journal of Medicine
- American Journal Of Gastroenterology
- BMJ
- Egyptian Heart Journal

9. Signature			
Course Coordinator			
Principal Coordinator: Dr Saffa Abd Elstar Dr. Safinaz Hussein	Head of the Department: Prof. Mohamed Elyamany		
Date:	Date:		

Course 6 Clinical hematology 1

- Course Title: Clinical Hematology 1
- **Course code:** BLO218D
- **4** Speciality is Clinical Hematology
- Number of credit points: Lectures 1 (33.3%), practical 2 (66.7%).total 3.
- Department (s) delivering the course: Clinical Hematology in conjunction with Internal medicine department
- Coordinator (s): Staff members of clinical Hematology
 Department in conjunction with Internal medicine
 Department as annually approved by both departments
 councils

Date last reviewed: 9/5 / 2022

- Requirements (prerequisites) if any :
 - **4** None

2. Course Aims

The student should acquire the facts of clinical Hematology 1

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe Principles of:	-Lectures	-Written and oral
-RBCs related disorders as anaemia -WBCs disorders and hematological malignancies -Coagulation disorders		examination - Log book

B-Intellectual outcomes

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A. Correlates the facts of Clinical Hematology 1 with clinical reasoning, diagnosis and management of common diseases related to clinical haematology.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book

C-Practical skills

ILOs	Methods	of	Methods of
	teaching/		Evaluation
	learning		
A- Master the basic skills in of Clinical Hematology 1	Laboratory		-Assessment of
	work		practical skills
			-Logbook
B-Use information technology to support decisions			
related to of Clinical Hematology 1			
C. Identify common problems of clinical haematology 1			
by doing biochemical tests, microscopic examination			
and Training on blood film of blood components, bone			
marrow aspirate.			

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A. Perform data management including data entry	-Observation	Log book
and analysis.	and	
	supervision	
	-Written and	
	oral	
	communication	

ILOs	Methods of teaching/	Methods of Evaluation
	learning	
A. Perform data management including data entry	-Observation	Log book
and analysis.	and	
	supervision	
	-Written and	
	oral	
	communication	

Interpersonal and Communication Skills

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
B. Elicit information using effective nonverbal,	-Observation	Log book
explanatory, questioning, and writing skills.	and	
	supervision	
	-Written and	
	oral	
	communication	
C. Write a report in common condition mentioned		
in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff	Logbook
	experience	

4-Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Торіс	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
-RBCs related disorders as anaemia	A	A	A-C	A-E
WBCs disorders and hematological malignancies	A	A	A-C	A-E
Coagulation disorders	А	А	A - C	A-E

5. Course Methods of teaching/learning:

1 Laboratory work

2 Didactic (lectures, seminars, tutorial

3 Observation and supervision

- 4 Written & oral communication
- **5** Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- 1. Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2. Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools:

- 1- Written and oral examination
- **2** Assessment of practical skills)
- 3- Log book
- ii. Time schedule: At the end of the first part
- iii. Marks: 50

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

- Essential haematology 7 edition.

iii. Recommended books

- Oxford clinical haematology, 4 edition.

iv. Periodicals, Web sites, ... etc

www.biomedcentral.com

9. Signature

Course Coordinator		
Course Coordinator:	Head of the Department:	
Dr.Saffa Abd Elstar	Prof Mohamed Elyamany	
Dr. Safinaz Husein		
Date:	Date:	

Course 7 Clinical Haematology 2

Name of department: Internal Medicine, Clinical Haematology Unit

- Faculty of medicine
- Assiut University
- **2021-2022**

1. Course data

- **Course Title:** Clinical Haematology 2
- **Course code:** BLO218E#
- Speciality Clinical Haematology
- Number of credit points: 24 lectures (17.9%) practical 96 (82.1%) total 120
- Department (s) delivering the course: Staff member of haematology unit of clinical pathology department for Advanced clinical pathology 2
- **Coordinator** (s):

1-Principal coordinator:

Dr. Saffa Abd Elstar

2- Assistant coordinator (s)

- All Staff member of haematology unit

Dr. Safinaz Husein

4 Date last reviewed: 9/ 5 / 2022

General requirements (prerequisites) if any :

Rotation of all branches of internal Medicine

2. Course Aims

1-The overall aim is to enable the student to acquire the skills and knowledge to provide good care for patients in haematology ward and outpatient clinic .

2-To enable the students to cooperate with colleagues in other medical and surgical specialties.

3-be able to understand and properly use the hematological laboratory tests.

4- To use blood products properly and work in bone marrow transplantation centers.

5- To share in hematological research work.

3. Course intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe the etiology, clinical picture, diagnosis and management of the following diseases and clinical conditions:	Didactic; -Lectures -Clinical rounds -Seminars	OSCE at the end of each year -log book &
Red blood cell disorders	-Clinical rotations	portfolio - MCQ
Megaloblastic anaemia	(service teaching)	examination at the
Iron deficiency anaemia and microcytic and hypochromic anaemia	Observation, assisting and	second year -Oral and
Inherited hemolytic anemias	discussion with senior medical	written exam
Acquired hemolytic anemias	staff Laboratory and	
Acquired and constitutional aplastic anemia	clinical multidisciplinary	
Iron overload disorders	team meetings Personal study	
Polycythaemia		

Benign WBCs disorders	
Leucopenias and leucocytosis	
Myelofibrosis	
Primary and secondary immunodeficiency diseases	
Reactive lymphocyte disorders and lymphadenopathy	
Haematological Malignacies	
Acute myeloid leukemias	
Myelodysplastic Syndrome	
Acute lymphoblastic leukaemia	
Chronic lymphocytic leukaemia	
Myelopoiferaive disorders: Chronic meyloid leukaemia, Polycythemia Vera, myelofibrosis and ET	
Hodgkin's disease and Non Hodgkins's lymphoma	
Multiple Myeloma and Plasma cell disorders	
Heavy chain disease and Waldenstrom Macroglobulinaemia and Hairy cell leukaemia	
Haemostatic Disorders & Thrombophilia	
Hemophilia, von Willebrand's disease and other hereditary coagulation disorders	
Acquired coagulation disorders (DIC & liver dis.	
Thrombotic thrombocytopenic Purpura and HUS	
Thrombocytopenias – acquired and hereditary	
Qualitative platelet disorders and Hereditary vW disease	
Vascular purpuras	
--	--
Hereditary and acquired thrombophilias	
Anticoagulation and its disorders	
Thrombocytosis reactive and ET	
Indications and hazards of transfusion Medicine	
- Transfusion of red blood cells	
- Pathogenesis, diagnosis, prevention and treatment of new diseases or viral infection (e.g. COVID-19) related to Clinical Hematology.	
 B. Mention the principles of → Haemopoiesis RBCs and WBCs -Iron, Vitamin B12 and folic acid metabolism 	
- RBC & Hb physiology WBC & platelet physiology	
- Haemostasis system and its control	
- Cellular and humoral immunity	
-Cytogenetics and molecular basis of oncology	
-Application of nuclear medicine in haematology	
Platelet transfusion and Apharesis Advanced clinical pathology 2 Blood Bank and transfusion	
Medicine	
Indications and hazards of transfusion Medicine	
- Transfusion of red blood cells	
Platelet transfusion and Apharesis	
Fresh frozen plasma, Old plasma and Cryoprecipitate	
Autologous blood transfusion and	
Intravenous immunoglobulin	
Bone Marrow Transplantation	
Bone marrow harvesting	

Stem cell transplant conditioning protocols	
Prepheral blood stem cell mobilization and harvesting	
Infusion of stem cell Autologous bone marrow and blood stem cell transplantation	
Allogenic bone marrow and blood stem cell transplantation Blood product support of stem cell transplantation	
Complications of stem cell transplantation	
Laboratory Hematology for Specialist	
Blood Films normal , benign and malignant Bone Marrow Aspirate	
Bone Marrow Biopsy Workup of Hemoglobinopathy Workup of Hemolytic Anemia	
Sickle Test Hemoglobin Electrophoresis	
Manual and Automated Hemostasis Testing Platelet Function Tests Workup of Hemophilia	
Workup of Thrombophilia	
Flowcytometry introduction , basis , clinical application and interpretation in benign and malignant hematological disorders	
C. State update and evidence based Knowledge of DIC	
Coagulation factor inhibitors congenital coagulation disorders including Haemophilia A, Haemophilia B and Von Willebrand Disease Acute myeloid leukaemia Acute lymphoblastic leukaemia Chronic myeloid leukaemia Chronic Lymphocytic leukaemia- Non-Hodgkins lymphoma Hodgkin lymphoma Myelopoiferaive disorders Multiple Myeloma and Plasma cell disorders	
Transfusion Therapy and BMT	

Hematological manifestations of Covid 19 infection.	
D. Memorize the facts and principles of the relevant basic and	
clinically supportive sciences related to Clinical Haematology	
E. Mention the basic ethical and medicolegal principles	
revenant to the Clinical Haematology	
F. Mention the basics of quality assurance to ensure good	
clinical care in Clinical Haematology	
G. Mention the ethical and scientific principles of medical	
research	
H. State the impact of common health problems in the field	
of Clinical Haematology on the society.	

B- Intellectual outcomes

ILOs	Methods of	Methods of
	teaching/	Evaluation
	learning	
A. Correlates the facts of relevant basic and clinically	Clinical rounds	Procedure/case
supportive sciences with clinical reasoning, diagnosis and	Senior staff	presentation
management of common diseases related to Clinical	experience	Log book
Haematology		
B. Demonstrate an investigatory and analytic thinking		
(problem solving) approaches to common clinical situations		
related to Clinical Haematology		
C. Design and present cases , seminars in common		
problem		
D-Formulate management plans and alternative decisions		
in different situations in the field of the Clinical		
Haematology		

C- Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Obtain proper history and examine patients in caring		
and respectful benaviors.		
B-Order the following non invasive/invasive diagnostic	-Didactic;	OSCE at the end
procedures	-Lectures	of each year
CSF cytological appearances	-Clinical	-log book &
Routine appropriate Lab investigations related to	rounds	portfolio

conditions mentioned in A.A	-Seminars	- One MCQ
Abdominal US	-Clinical	examination at
Pleural aspiration	rotations	the second half
Ascetic aspiration sample	(service	of the second
Report of coagulation profile	teaching)	year and
PTT		another one in
PROTHROMBIN TIME & CONCENTRATION.		the third year
Platelet functions		
ESR		
LDH		
Coomb"s Test		
Complete blood count and Blood film		
Bone marrow aspirate and or biopsy		
immunophnotype and cytogenetic testing testing		
Fish technique for residual disease		
the lymph node biopsy		
splenic aspirate		
Histocompatibility & tissue typing		
C. Interpret the following non invasive/invasive	Clinical round	Procedure
diagnostic procedures	with senior	presentation
-Routine appropriate Lab investigations	staff	- Log book
related to conditions mentioned in A.A		- Chick list
 Ultrasonoghraphy, X ray, CT and MRI 		
Clotting factors		
Coagulation profile.		
Platelet function tests		
lymph node biopsy		
CSF cytological appearances		
Coomb"s Test		
Kidney Function Tests		
Bone marrow aspirate		
D.Perform the following non invasive/invasive	Clinical round	Procedure
therapeutic procedures	with senior	presentation
Complete blood count and Blood film	staff	- Log book
ECG	-Perform	- Chick list
light microscope	under	
Describe the use of different stains	supervision of	
-Blood gases	senior staff	
-CVP		
-urine analysis		

Blood sugar estimation			
-Urinalysis			
-Application of intravenous cannula.			
-Insulin administration.			
-Pleural aspiration			
Abdominal Paracentesis			
-Nasogastric tube and sungestaken tube application			
Lumber puncture			
Bone marrow aspirate			
E- Prescribe Proper drug regimens	Clinical	round	Procedure
Anticoagulants medications.	with	senior	presentation
Cryopreciptate.	staff		- Log book
stem cell transplantation	••••		- Chick list
Acute and Chronic GVHD			Chick hot
Blood products			
Prescribe and administer complex chemotherapy			
regimens appropriately under supervision			
Safe and appropriate transfusion of blood products			
Prescribe and perform cenral venous line			
give intrathecal -chemotherapy			
prescribe /perform Pleural aspiration			
Management of neutropenic fever			
Management of DIC			
Anti-emetics			
Drug Interaction			
Antibiotic use			
F. Carry out patient management plans for common	Clinical	round	
conditions related to Clinical Haematology	with	senior	
	staff		
G. Use information technology to support patient care			
decisions and patient education in common clinical			
situations related to Clinical Haematology			
H-Provide health care services aimed at preventing health			
problems related to Clinical Haematology			
I. Provide patient-focused care in common conditions			
related to Clinical Haematology while working with health			
care professionals, including those from other disciplines			

D- <u>General Skills</u> Practice-Based Learning and Improvement

ILOs	Methods of	Methods of
	teaching/ learning	Evaluation
A. Perform practice-based improvement activities using a systematic methodology(audit, logbook)	Case log -Observation and supervision -Written & oral	Procedure/case presentation -Log book and Portfolios
B. Appraises evidence from scientific studies(journal club)	communication -Journal clubs - Discussions in seminars and clinical rounds	
C. Conduct epidemiological Studies and surveys.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.	Clinical rounds Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain therapeutic and ethically sound relationship	Simulations	
with patients.	Clinical round	Global rating
	Seminars	Procedure/case
	Lectures	presentation
	Case	Log book
	presentation	Portfolios
	Hand on	Chick list
	workshops	
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		

H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care		
team or other professional group.		
J. Present a case in common problems related to Internal	Clinical round	Clinical Exam
Medicine	Seminars	
K. Write a report in -Patients medical report	Senior staff	
- Discharge report	experience	Chick list
-Death report		
L. Council patients and families about clinical haematology	Clinical round	
related diseases	with senior	
	staff	
Professionalism		

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	 Objective structured clinical examination Patient survey
N. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		1. 360o global rating
O. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		 Objective structured clinical examination 3600 global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
P. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating
Q. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance
R. Assist patients in dealing with system complexities.		 360o global rating Patient survey

Course contents (topic s/modules/rotation Course Matrix for clinical hematology

Time Schedule: Second part

Торіс	Covered ILOs			
	Knowledge	Intellectual	Practical	General
	Α	В	skill C	Skills D
Haemopoiesis RBCs	B,D-H	A-D	A-I	A-R
and WBCs				
Red blood cell disorders	А,С,Д-Н	A-D	A-I	A-R
Benign	A,C,D-H	A-D	A-I	A-R
WBCs disorders				
Hematological Malignancies	A,C,D-H	A-D	A-I	A-R
Haemostatic Disorders & Thrombophilia	А,С,Д-Н	A-D	A-I	A-R
Blood Bank and transfusion Medicine	B,D-H	A-D	A-I	A-R
Bone Marrow Transplantation	B,D-H	A-D	A-I	A-R
Laboratory Hematology for Specialist	B,D-H	A-D	A-I	A-R
-Pathogenesis, diagnosis, prevention and treatment of new diseases or viral infection (e.g. COVID-19) related to Clinical Hematology.	A, D-H	A-D	A-I	A-R

5. Methods of teaching/learning(course 4,5):

- 1. Didactic (lectures, seminars, tutorial)
- 2. Outpatient
- 3. Inpatient
- 4. Case presentation
- 5. Direct observation
- 6. journal club
- 7. Critically appraised topic.
- 8. Educational prescription
- 9. Clinical rounds
- 10. Clinical rotation
- **11**. Senior staff experience
- 12. Hand on work shop
- **13**. Service teaching
- 14. Perform under supervision of senior staff
- **15**. Postgraduate teaching

6. Methods of teaching/learning: for students with poor achievements(course 4,5):

- 1. Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2. Extra training according to their needs
 - 7. Assessment methods(course 4,5):

i. Assessment tools:

- 1. Oral examination
- 2. Clinical examination
- 3. Written examination
- 4. Objective structure clinical examination (OSCE)
- 5. Procedure/case Log book and Portfolios
- 6. Patient survey
- 7. 3600 global rating
- 8. Check list evaluation of live or recorded performance
- 9. MCQ Exam

ii. Time schedule: At the end of second part

iii. Marks: 1200

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

1- Essential haematology 7th edition

iii. Recommended books

- 1. Macloid clinical methods.
- 2. Oxford clinical haematology 4th edition
- iv. Periodicals, Web sites, ... etc
- Blood

	9. Signature				
	Course Coordinator				
Ρ	rincipals Coordinator:	Dr.Saffa Abd Elstar	Head of the Department: Prof Mohamed Elyamany		
D	r. Safinaz Hussein				
	Date:		Date:		

ANNEX 2 Program Academic Reference Standards (ARS)

1- Graduate attributes for master degree in Clinical Haematology

The Graduate (after residence training and master degree years of study) must:

1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and clinical audit *in Clinical Haematology*.

2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in *Clinical Haematology* 3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in the field of *Clinical Haematology* 4- Provide patient care that is appropriate, effective and compassionate for dealing with common health problems and health promotion using evidence-based and updated information.

5- Identify and share to solve health problems in his speciality.

6- Acquire all competencies –including the use of recent technologies- that enable him to provide safe, scientific, and ethical and evidence based clinical care including update use of new technology in *Clinical Haematology*.

7- Demonstrate interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.

8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.

9- Acquire decision making capabilities in different situations related to *Clinical Haematology* **10-** Show responsiveness to

the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.

11- Be aware of public health and health policy issues and share in system-based improvement of health care.

12- Show appropriate attitudes and professionalism.

13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in *Clinical Haematology*.

2- Competency based Standards for clinical master degree grduates

2.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problem and topics.
2-1-B- The relation between good clinical care of common

health problems in the speciality and the welfare of society.

2-1-C- Up to date and recent developments in common problems related to *Clinical Haematology*

2-1-D- Ethical and medicolegal principles relevant to practice in *Clinical Haematology*.

2-1-E -Quality assurance principles related to the good medical practice in *Clinical Haematology*

2-1-F- Ethical and scientific basics of medical research.

2.2- Intellectual skills:

By the end of the program, the graduate should be able to demonstrate the following:

2-2-A- Correlation of different relevant sciences in the problem solving and management of common diseases of *Clinical Haematology*.

2-2-B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to *Clinical Haematology*

.2.2- C- Demonstrating systematic approach in studying clinical problems relevant to *Clinical Haematology*.

2-2-D- Making alternative decisions in different situations in

Clinical Haematology.

2.3- Clinical skills

By the end of the program, the graduate should be able to

2-3-A - Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

2-3-B- Demonstrate patient care skills relevant to *Clinical Haematology* for patients with common diseases and problems.

2-3- C- Write and evaluate reports for situations related to the field of *Clinical Haematology*

2.4- General skills

By the end of the program, the graduate should be able to

Competency-based outcomes for Practice-based Learning and Improvement

2-4-A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence,, improvements in patient care and risk management.

2-4-B- Use all information sources and technology to improve his practice.

2-4-C- Demonstrate skills of teaching and evaluating others.

Competency-based objectives for Interpersonal and Communication Skills

2-4-D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

4 Competency-based objectives for Professionalism

2-4-E- Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Competency-based objectives for Systems-based Practice

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

2-4-g- Demonstrate skills of effective time management.

2-4-H- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

	Patient care	Medical knowledge	Practice- based learning/ Improvemen t	Interpersonal and communicatio n skills	Professionalism	Systems- based practice
Didactic (lectures, seminars, tutorial)	Х	Х		Х	Х	Х
journal club,	Х	Х	Х			
Educational prescription	Х	Х	Х	Х	Х	Х
Present a case (true or simulated) in a grand round	Х	Х	Х	Х	Х	
Observation and supervision	Х		Х	Х	Х	Х
conferences		Х	Х	Х		Х
Written assignments	Х	X	X	Х	X	X
Oral assignments	Х	X	X	Х	X	X

Annex 3, Methods of teaching/learning

Teaching methods for knowledge

- Didactic (lectures, seminars, tutorial)
- ✤ journal club
- Critically appraised topic
- Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- Present a case (true or simulated) in a grand round
- Others

Teaching methods for patient care

- Observation and supervision /Completed tasks procedure/case logs
- On-the-job" training without structured teaching is not sufficient for this skill (checklists).
- Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for Master Degree students.

Method	Practica l skills	K	Intellectu al		General	l skills	
	Patient care	К	Ι	Practice- based learning/ Improveme nt	Interperso nal and communica tion skills	Professional ism	Systems -based practice
Record review	X	X	X		X	Х	X
Checklist	X				Х		
Global rating	Х	Х	X	Х	Х	Х	Х
Simulations	Х	X	Х	Х	Х	Х	
Portfolios	Х	Х	X	Х	Х		
Standardized oral examination	Х	X	Х	Х	Х		Х
Written examination	Х	Х	Х	Х			Х
Procedure/ case log	Х	X					
OSCE	X	X	X	Х	Х	X	X

Annex 4, Glossary of Master Degree doctors assessment methods

- Record Review Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- Chart Stimulated Recall Uses the MSc doctor's patient records in an oral examination to assess clinical decision-making.
- Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- Standardized Patients (SP) Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MSc doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MSc doctor's performance.
- Objective Structured Clinical Examination (OSCE) A series of stations with standardized tasks for the MSc doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MSc doctors.
- Procedure or Case Logs MSc doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by a MSc doctors.
- Case /problems assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.

- 360 Global Rating Evaluations MSc doctors, faculty, nurses, clerks, and other clinical staff evaluate MSc doctors from different perspectives using similar rating forms.
- Portfolios A portfolio is a set of project reports that are prepared by the MSc doctors to document projects completed during the MSc study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- Examination MCQ A standardized examination using multiplechoice questions (MCQ). The in-training examination and written board examinations are examples.
- Examination Oral Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- Procedure or Case Logs MSc doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MSc doctors.

Annex 5, program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports	#
	Field visits	
External Evaluator	Reports	#
(s):According to department	Field visits	
External Examiner (s):		
According to department		
council		
Stakeholders	Reports	#
	Field visits	
	questionnaires	
Senior students	questionnaires	#
Alumni	questionnaires	#

Annex 6, program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الماجستير مع المعايير الأكاديمية المعتمدة من كلية الطب 🗌 جامعة أسيوط لدرجة الماجستير في أمراض الدم الاكلينيكية

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for
	Postgraduate Programs
 Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and clinical audit in <i>Clinical</i> <i>Haematology</i> 	1- إجادة تطبيق أساسيات و منهجيات البحث العلمي واستخدام أدواته المختلفة
2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in orthopaedic <i>Clinical</i> <i>Haematology</i>	2-تطبيق المنهج التحليلي واستخدامه في مجال التخصص
3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in <i>Clinical</i> <i>Haematology</i> .	3-تطبيق المعارف المتخصصة و دمجها مع المعارف ذات العلاقة في ممارسته المهنية
4- Provide patient care that is appropriate, effective and compassionate for dealing with common health problems and health promotion using evidence-based and update information.	4-إظهار وعيا بالمشاكل الجارية و الرؤى الحديثة في مجال التخصص
5- Identify and share to solve health problems in <i>Clinical Haematology</i> .	5-تحديد المشكلات المهنية و إيجاد حلولا لها
6- Acquire all competencies that enable him to provide safe, scientific, ethical and evidence based clinical care including update use of new technology in <i>Clinical</i> <i>Haematology</i> .	6-إتقان نطاق مناسب من المهارات المهنية المتخصصة، واستخدام الوسائل التكنولوجيةالمناسبة بما يخدم ممارسته المهنية

 7- Demonstrate interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public. 8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions. 9- Acquire decision making canabilities in 	7-التواصل بفاعلية و القدرة على قيادة فرق العمل
different situations related to <i>Clinical</i> <i>Haematology</i> .	8–انحاد الفرار في سيافات مهنية محتلفة
10- Show responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.	9– توظيف الموارد المتاحة بما يحقق أعلي استفادة و الحفاظ عليها
11- Be aware of public health and health policy issues and share in system-based improvement of health care.	10-إظهار الوعي بدوره في تنمية المجتمع و الحفاظ على البيئة في ضوء المتغيرات العالمية و الإقليمية
12- Show appropriate attitudes and professionalism.	11-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و الالتزام بقواعد المهنة
 13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in <i>Clinical</i> <i>Haematolog</i> 	12-تنمية ذاته أكاديميا و مهنيا و قادرا علي التعلم المستمر

2. Academic standard

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
2.1.A -Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problems and topics.	2-1-أ-النظريات و الأساسيات المتعلقة بمجال التعلم وكذا في المجالات ذات العلاقة.
2.1.B- The relation between good clinical care of common health problems in <i>Clinical Haematology</i>	1-2-ب-التأثير المتبادل بين الممارسة المهنية وانعكاسها علي البيئة.
2.1. C- Up to date and recent developments in common problems related to <i>Clinical Haematology</i>	1-2-ج-التطورات العلمية في مجال التخصص.
2.1. D- Ethical and medicolegal principles relevant to practice in <i>Clinical Haematology</i>	2–1–د–المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص.
2.1. E-Quality assurance principles related to the good medical practice in <i>Clinical</i> <i>Haematology</i> .	2–1–ه– مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. F- Ethical and scientific basics of medical research.	1-2-و- أساسيات وأخلاقيات البحث العلمي
 2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of <i>Clinical Haematology</i>. 2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to <i>Clinical Haematology</i>. 	2–2–أ– تحليل و تقييم المعلومات في مجال التخصص والقياس عليها لحل المشاكل

2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to <i>Clinical</i> <i>Haematology</i> .	2-2-ب- حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of <i>Clinical Haematology</i> .	2-2-ج- الربط بين المعارف المختلفة لحل المشاكل المهنية
2.2. C- Demonstrating systematic approach in studying clinical problems relevant to the <i>Clinical Haematology</i> .	2-2-د- إجراء دراسة بحثية و /أو كتابة دراسة علمية منهجية حول مشكلة بحثية
2.4.A-Demonstrate practice-based learning and Improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2–2ه- تقييم المخاطر في الممارسات المهنية في مجال التخصص
2.4.A-Demonstrate practice-based learning and Improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-2-و – التخطيط لتطوير الأداء في مجال التخصص
2.2.D- Making alternative decisions in different situations in the field of <i>Clinical Haematology</i>	2-2-ز – اتخاذ القرارات المهنية في سياقات مهنية متنوعة
 2.3.A- provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. 2.3.B- Demonstrate patient care skills relevant to <i>Clinical Haematology</i> for patients with common diseases and problems. 	2-3-أ- إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص

2.3.C- Write and evaluate reports for	2–3–ب– كتابة و تقييم التقارير المهنية
Situation related to <i>Clinical</i>	
Haematology	
2.3.A- provide patient care that is	2-3-ج- تقييم الطرق و الأدوات القائمة في مجال
compassionate, appropriate, and	
effective for the treatment of health	الدحصيص
problems and the promotion of health.	
2.3.B- Demonstrate patient care skills	
relevant to that speciality for patients	
with common diseases and problems.	
2.4.D- Demonstrate interpersonal and	2–4–أ–التواصل الفعال بأنواعه المختلفة
communication skills that result in	5.2 2 5
effective information exchange and	
teaming with patients, their families,	
and other health professionals.	
2.4.A-Demonstrate practice-based	2–4–ب– استخدام تكنولوجيا المعلومات بما يخدم الممارسة
learning and improvement skills that	
investigation and involves	المهدية
evaluation of their own patient care,	
appraisal and assimilation of scientific	
evidence, improvements in patient care	
and risk management	
2.4.B- Use all information sources and	
technology to improve his practice.	
2.4.A-Demonstrate practice-based	2-4-ج- التقييم الذاتي وتحديد احتياجاته التعلمية الشخصية
learning and improvement skills that	
involves investigation and evaluation	
of their own patient care, appraisal and	
assimilation of scientific evidence,	
improvements in patient care and risk	
management	
2.4.B- Use all information sources	
and technology to improve his	
practice.	
2.4.E-Demonstrate professionalism behavior,	
as manifested through a commitment	
to carrying out professional	
responsibilities, adherence to ethical	
principles, and sensitivity to a diverse	

patient population.	
2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, , improvements in patient care and risk management.	2-4-د- استخدام المصادر المختلفة للحصول على المعلومات و المعارف
2.4. C- Demonstrate skills of teaching and evaluating others.	2–4–هـ– وضع قواعد ومؤشرات تقييم أداء الآخرين
2.4. F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.	2-4-و – العمل في فريق ، وقيادة فرق في سياقات مهنية مختلفة
2.4.G- Demonstrate skills of effective time management.	2-4-ز - إدارة الوقت بكفاءة
2.4.H- Demonstrate skills of self and continuous learning.	2–4–ح– التعلم الذاتي و المستمر

Comparison between ARS and ILOS for master degree in Clinical Haematology

(ARS)	(ILOs)
2-1- Knowledge and understanding	2-1- Knowledge and understanding
2-1-A- Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problem and topics.	 2-1-A- Explain the essential facts and principles of relevant basic sciences including, , Physiology, Biochemistry, Pathology, Microbiology and clinical pathology related to Clinical Haematology. 2-1-B- Mention <u>essential facts</u> of clinically supportive sciences including Internal Medicine related to haemtology, Clinical heamatology 1 related to <i>Clinical Haematology</i>. 2-1-C- Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to <i>Clinical Haematology</i>
 2-1-B The relation between good clinical care of common health problem in <i>Clinical</i> <i>Haematology</i> theelfare of society. 	 2-1-H- State the impact of common health problems in the field of <i>Clinical Haematology</i> on the society and how good clinical practice improve these problems.
2-1-C- Up to date and recent developments in common problems related to the field of <i>Clinical Haematology</i>	 2-1-C- Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to <i>Clinical Haematology</i>. 2-1-D- Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment of common diseases related to <i>Clinical Haematology</i>.
2-1-D- Ethical and medicolegal Principles relevant to practice in	2-1-E- Mention the basic ethical and medicolegal principles that should be

Clinical Haematology	applied in practice and are relevant to
	the field of Clinical Haematology .
2-1-E-Quality assurance	2-1-F- Mention the basics and standards of quality
principles	assurance to ensure good clinical practice in the
related to the good	field of <i>Clinical Haematology</i>
medical practice in	
Clinical	
Haematology	
2-1-F- Ethical and scientific basics of	2-1-G- Mention the ethical and scientific principles of
medical research.	medical research methodology.
2-2- Intellectual skills:	<u>2-2- Intellectual skills:</u>
2-2-A-Correlation of different	2-2-A- Correlate the facts of relevant basic and
relevant sciences in the	clinically supportive sciences with clinical
problem solving and	reasoning, diagnosis and management of
management of	common diseases of the <i>Clinical</i>
common diseases of	Haematology
Clinical	
Haematology.	
2-2-B-Problem solving skills	2-2-B- Demonstrate an investigatory and
based on data analysis	analytic thinking approach (problem
and evaluation (even in	solving) to common clinical situations
the absence of some)	related to <i>Clinical Haematology</i>
for common clinical	
situations related to	
Clinical	
Haematology.	
2-2-C- Demonstrating	2-2-C- Design and /or present a case or review
systematic approach in	(through seminars/journal clubs.) in one
studding clinical	or more of common clinical problems
problems relevant to the	relevant to <i>Clinical Haematology</i>
Clinical	
Haematology.	
2-2-D Making alternative	2-2-D- Formulate management plans and
decisions in different	alternative decisions in different
situations in the field of	situations in the field of <i>Clinical</i>
Clinical	Haematology.
Haematology.	

continuous

continuous

(ILOs)

2/3/1/Practical skills (Patient Care :)

2-3- Clinical skills:

(ARS)

2-3-A- Provide patient care that is 2-3-1-A- Obtain proper history and examine patients compassionate, appropriate, in caring and respectful behaviors. and effective for the treatment 2-3-1-B- Make informed decisions about of health problems and the diagnostic and therapeutic interventions promotion of health. based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for 2-3-B- Demonstrate patient common conditions related to care skills relevant to Clinical Haematology. Clinical *Haematology* for 2-3-1-C- Carry out patient management plans patients with common for common conditions related to diseases and problems. Clinical Haematology. **2-3-1-D-** Use information technology to support patient care decisions and patient education in common clinical situations related to *Clinical Haematology* 2-3-1-E- Perform competently non invasive and invasive procedures considered essential for the *Clinical Haematology*. 2-3-1-F- Provide health care services aimed at preventing health problems related to Clinical Haematology 2-3-1-G- Provide patient-focused care in common conditions related to *Clinical* Haematology. , while working with health care professionals, including those from other disciplines. 2-3-C- Write and evaluate reports for -3-1-H Write competently all forms of patient charts situations related to the field of and sheets including reports evaluating these

Clinical Haematology	charts and sheets. (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records).
2-4- General skills	2/3/2 General skills
2-4-A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	 2-3-2-A- Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks). 2-3-2-B- Appraises evidence from scientific studies. 2-3-2-C- Conduct epidemiological studies and surveys.
2-4-B- Use all information sources and technology to improve his practice.	 2-3-2-C- Conduct epidemiological studies and surveys. 2-3-2-D.Perform data management including data entry and analysis and using information technology to manage information, access on- line medical information; and support their own education.
2-4-C- Demonstrate skills of teaching and evaluating others.	2-3-2-E- Facilitate learning of students other health care professionals including their evaluation and assessment.
2-4-D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	 2-3-2-F- Maintain therapeutic and ethically sound relationship with patients. 2-3-2-G- Elicit information using effective nonverbal, explanatory, questioning, and writing skills. 2-3-2-H- Provide information using effective nonverbal, explanatory, questioning, and writing skills. 2-3-2-I- Work effectively with others as a member of a health care team or other professional group.

2-4-E-Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	 2-3-2-J- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society. 2-3-2-K- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices. 2-3-2-L-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities. 							
2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.	 2-3-2-M-Work effectively in relevant health care delivery settings and systems including good administrative and time management 2-3-2-N- Practice cost-effective health care and resource allocation that does not compromise quality of care. 2-3-2-O- Assist patients in dealing with system complexities. 							
2-4-G - Demonstrate skills of effective time management	2-3-2-M -Work effectively in relevant health care delivery settings and systems including good administrative and time management							
2-4-H- Demonstrate skills of self and continuous learning.	2-3-2-A- Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).							
Course	Program covered ILOs							
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	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E	2/1/F	2/1/G	2/1/H
Course 1 :	\checkmark							
Physiology and								
Biochemistry								
course 2 :	✓							
Pharmacology								
&Pathology								
course 3 :	\checkmark							
Microbiology and								
immunology								
course 4 : Clinical pathology1	~							
<i>Course 5</i> Internal Medicine related to hematology.	~	V	V	V	√	√	~	✓
<i>Course 6</i> Clinical Hematology 1 (Introduction to Blood diseases)	~							
<i>Course 7</i> Clinical Hematology 2	✓	\checkmark	✓	✓	✓	✓	v	~

III-Program matrix Knowledge and Understanding

Intellectual Practical Skills (Patient Care) General Skills

Course	Program covered ILOs					
	2/2/A	2/2/B	2/2/C	2/2/D		
Course 1 : Physiology and	\checkmark					
Biochemistry						
course 2 : Pharmacology	✓					
&Pathology						
course 3: Microbiology and	\checkmark					
immunology						
course 4 : Clinical pathology1	\checkmark					
<i>Course 5</i> Internal Medicine related to hematology.	\checkmark	\checkmark	\checkmark	\checkmark		
<i>Course 6</i> Clinical Hematology 1 (Introduction to Blood diseases)	~					
<i>Course 7</i> Clinical Hematology 2	~	~	~	~		

Annex 6, program Correlations:

Staff members:

-Prof. Osama A. Ibrahim Prof. Dr. Youseryia A. Ahmad Prof. Dr. Esam A.S. Elbeih Prof. Howaida Nafady

- Dr.Mohammad Ramadan
- Dr. Ahmad F. Thabet
- DR.Rania Hafez
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End of course specification