



كلية الطب



Faculty of Medicine
Clinical Pathology Department

Clinical Pathology Department

For

Candidates of Master Degree
of Transfusion Medicine

2022-2023





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Name.....

Date of birth.....

Master Degree of transfusion medicine Log Book

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Address.....

Place of work.....

Telephones.....

Mobile phone(s).....

E mail.....

Name of hospital	Period of work	Hospital director signature

Academic Information

MBBCh...../...../..... University Grade

Grade of Internal Medicine course on graduation

Others...../...../..... University

...../...../..... University

Aim of the activities book



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To provide one source of evidence for the assessment committee that you attained the desired level of competency required to gain the award.

In this book you will document all practical, academic and other experiences and skills you attained during your training.

Sections of the book

For each module / course / rotation

You should fill the following sections:-

1- Clinical and Laboratory Skills log

- 1- You will find a list for required laboratory skills and level of desired performance you should achieve at the end of training.
- 2- You will find empty tables to write down the laboratory skills, your level of participation and date and signature of supervisor.

2- Rotation / attendance proof

You should have evidence of achievement the required training hours within each course.

For the whole program fill the following sections.

1- Academic activities

- A- Document all academic activities e.g. lecture, journal clubs, workshops, conference, services attended. This documentation should include the level of participation " attendance, preparation, presentation,....."

2- Academic achievements



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A- Document all outcomes you achieved in the field of:-

- Audit participation
- Research "clinical trial" participation.
- Evidence- based medicine "generation of guidelines" protocols

3- Formative assessment log

This document all types of formative assessment attended e.g.:-

- Mini clinical examination
- Quizzes

Program aims:

1/1 To enable candidates to keep with international standards of Transfusion Medicine by teaching high level of Clinical and laboratory skills, in addition to update medical knowledge as well as laboratory experience and competence in the area of Transfusion Medicine and Blood Bank management and enabling the candidates of making appropriate referrals to a patient's/donor care.

1/2. To help candidates develop an understanding of the appropriate use and interpretation of patient/donor care in transfusion medicine.

1/3 To become familiar with the consultation role of the different Blood components in patient care and research.

1/4 To provides candidates with a glimpse of the current state of the art technology and equipment of laboratory testing in clinical Transfusion medicine.

1/5 To introduce candidates to the basics of scientific medical research.

1/6 To provide the candidates with master degree:

- Enabling them to start professional careers as specialists in Egypt.
- Making them recognized as specialists abroad.
- Enabling them to pursue higher studies and subspecialties.
- Enabling them to understand and get the best of published scientific research and do their own.
- Updating their knowledge and self learning.
- Fellow the ethical standard of medical and clinical practice of patient care and research work according to our local Ethical Committee.



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Curriculum Structure:

Duration of program 36 months divided into

Program Structure

Program Time Table

Duration of program 3 years maximally 5 years divided into

+ Part 1

Program-related basic science courses and ILOs + elective courses

Students are allowed to set the exams of these courses after 12 months from applying to the M Sc degree according to departmental council agreement and rules.

+ 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 should not be set before 12 months from registering the M Sc subject;

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

+ Part 2

Program –related speciality courses and ILOs

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

N.B. Fulfillment of the requirements in each course as described in the template and registered in the log book is a pre-request for candidates to be assessed and undertake part 1 and part 2 examinations.



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Master Degree of transfusion medicine

• First Part:

Practice with the academic and clinical departments :

- **Course 1:** Basics of Transfusion Medicine.
- **Course 2:** Emergency in Transfusion Medicine.

Second Part:

Practice with blood transfusion bank- Clinical Pathology department
during years 1&2&3:

- **Course 3:** Transfusion medicine and blood banking.



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First Part

Practice with the academic and clinical departments during years 1&2 according to departmental council agreement and rules:

- **Course 1: Basics of Transfusion Medicine.**
- **Course 2: Emergency in Transfusion Medicine.**

Course 1: Basics of Transfusion Medicine.



Requirements

- ✚ Credit points: 12 credit points for didactic (lectures, seminars, tutorial).
- ✚ 2 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and laboratory training in each year. Training should be divided into 2 years for achievement of competency level and skills according to departmental council agreement).



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Year 1; level I (7 credit point for didactic)

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Basics of Transfusion Medicine.	1CP	Clinical Pathology,	10 hours	14.2% of all <u>Course didactics</u>
	0.1 CP		Blood donation <ol style="list-style-type: none"> Motivating factors for donation Whole blood donation Vs apheresis donation Types: allogeneic, autologous, directed Donor questionnaire and interview: Eligibility and deferral criteria Donor reactions and their management 	
0.2CP				
0.2CP				
0.1 CP				
0.4CP				
	2.0CP		20 hours	28.6% of all course didactics
	0.2CP		Blood component preparation <ol style="list-style-type: none"> Basic steps in component preparation & labelling Composition & storage Composition: volume, cellular, plasma and clotting factor content Storage conditions for components 	
	0.8 CP			
	0.8 CP			



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	2.0 CP		<p>20 hours Blood Group Serology/Biochemistry</p> <p>1. Immunologic principles</p> <ul style="list-style-type: none"> • Immunoglobulin structure and genetic basis for antibody diversity • Red cell alloantibodies vs. red cell autoantibodies • Primary and secondary immune responses to red cell antigens • “Naturally occurring” antibodies vs those requiring prior • immunization • Mechanisms of red cell sensitization • Mechanisms of red cell destruction <p>(1) Complement activation (2) Intravascular vs extravascular immune hemolysis</p>	28.6% of the didactics
	2.0 CP		<p>20 hours</p> <p>2. Red cell blood group antigens: biochemistry, genetic inheritance, immunogenicity, clinical significance, common phenotypes</p>	28.6%



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			<p>of:</p> <p>a) Carbohydrate blood group antigens ABH Lewis P I/i</p> <p>b) Protein blood group antigens Rh Kell Duffy Kidd MNS</p> <p>c) High frequency antigens d) Low frequency antigens</p> <p>3. Disease associations with the “null” phenotypes for ABO, Rh, Kell</p> <p>4. Serologic Testing</p> <p>a) Parameters affecting in vitro detection of antigen-antibody reactions</p> <p>b) Testing formats (1) Tube (2) Gel (3) Solid phase</p> <p>c) Indications, reagents, methods and interpretation of: (1) ABO/RhD typing (2) Weak D testing (3) Antibody screen</p>	
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			<p>(4) Antibody panel identification (5) Crossmatching Tests (a) Abbreviated b) Full (6) Enhancement techniques (a) Enzymes (b) LISS, PEG (7) Adsorption techniques (a) Autologous (b) Heterologous (8) Elution techniques (9) Neutralization techniques (10) Direct Antiglobulin Test (DAT) (11) Donath-Landsteiner Test (12) Hemolytic Disease of the Newborn (a) Rosette Test (b) Kleihauer-Betke Test (c) Antibody Titration Studies (13) Electronic crossmatching (a) Information system requirements (b) Procedural requirements (c) Advantages/disadvantages</p>	
Student signature			Principle coordinator signature	Head of the department signature



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Year 1; Level I (1,5 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Basics of Transfusion Medicine.	0.9 CP	Clinical Pathology department	* Practice with mentioned practical skills below for one month in the Blood Bank and immunology units including; ➤ interpretation of test results and related laboratory investigations ➤ Log of practical skills as mentioned below	60% of course training in year 1
	0.45 CP		➤ Attend practical teaching in department for at least 2 hours /week for 4 weeks	30% of course training in year 1
	0.15CP		➤ Formative assessment	10% of course training in year 1
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Basics of Transfusion Medicine practical skills log in the first year

1- Specimen collection, and handling	30 times; i.e. Level C 5 Level B 5 Level A 20	2-Basic Laboratory Techniques: <ul style="list-style-type: none"> Liquid handling using Pipettes Balances Centrifuges Microscopy, types of microscopes 	20 each; i.e. Level C 5 Level B 5 Level A 10
3- Lab safety: <ul style="list-style-type: none"> Specimen Transport Sample handling and storage in laboratory Disposal of clinical waste High Risk Samples How to use PPE Disposal of positive serology or NAT blood bags. Dealing of sharp sting Proper management of blood spillage 	Level C 10 (number) Level B 20 Level A 20	4- Deal with Blood donation: <ul style="list-style-type: none"> Criteria of blood donation Donation process Post donation care Labelling system for blood bags 	25 each; i.e. Level C 5 Level B 10 Level A 10
5- Blood component preparation	60 times; i.e. Level C 10 Level B 10 Level A 40	6- Blood Group Serology/Biochemistry	40 each; i.e. Level C 5 Level B 5 Level A 30
7- Red cell blood group antigens: biochemistry, genetic inheritance, <ul style="list-style-type: none"> immunogenicity, clinical significance, common phenotypes cross match 	30 runs; i. e. Level C 5 Level B 25 Level A 30	8- Interpretation of lab results mentioned above	200 times

* **Level of competency**

C- Observation

B- Performance under supervision

A- Independent performance



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Year 2; Level II (5 credit point for didactic)

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Basics of transfusion medicine	2.0 CP	Clinical Pathology blood banking unit	20 hours	40% of didactics
			IV- Infectious complications of transfusion: disease associations, significance, Incidence, per unit risk, pathophysiology, signs/symptoms, prevention, donor screening, management of: (1) Viral infections (a) Hepatitis B Virus (b) Hepatitis C Virus (c) HIV I/II (d) HTLV I/II (e) West Nile Virus (f) CMV (g) EBV (2) Bacterial infections Parasitic infections (a) Syphilis (b) Malaria (c) Babesia (d) Chagas Disease (4) Prion diseases (a) Creutzfeldt-Jakob Disease (b) Variant Creutzfeldt-Jakob Disease E. Apheresis: indications,	



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			<p>anticoagulation, timing of procedures, replacement fluids, venous access, recognition and management of adverse events for:</p> <ol style="list-style-type: none"> 1. Component collection <ol style="list-style-type: none"> a) Platelets b) Red cells c) Granulocytes d) Plasma 2. Therapeutic Apheresis procedures <ol style="list-style-type: none"> a) Plasma Exchange b) Red Cell Exchange c) Leukoreduction d) Red Cell Depletion e) LDL apheresis (Liposorber) f) Photopheresis 3. Peripheral Blood Stem Cell collections 	
	2CP		<p>20 HOURS</p> <p>PRETRANSFUSION TESTING Patient specimen labeling requirements Patient / component identification requirements ABO / Rh, Red cell antibody screen, Cross match Abbreviation of compatibility testing in emergency</p> <p>TRANSFUSION INDICATIONS Red blood cells, Platelets, Plasma / cryoprecipitate, Granulocytes</p>	40% of didactics



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			<p>Massive transfusion Metabolic complications Dilutional coagulopathy vs Trauma associated Coagulopathy Switching ABO / Rh types Adverse effects and mdicolegal aspect : related to blood donation and transfusion</p>	
	1CP		<p><u>10 Hours</u> Complication of blood donation immediate vasovagal Delayed vasovagal Chest pain Citrate reaction Haematoma Painful arm Nerve irritation Nerve injury Arterial puncture Delayed bleeding Thrombophlebitis Adverse effects of blood transfusion Acute transfusion reactions Haemolytic transfusion reaction Bacterial contamination and septic shock Transfusion associated circulatory</p>	20% of didactics



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			<p>overload Anaphylactic reaction Transfusion related acute lung injury</p> <p>Delayed complications of transfusion</p> <p>Delayed haemolytic transfusion reaction Post-transfusion purpura Transfusion associated graft-versus-host disease Delayed complications: transfusion transmitted infections</p> <p>Massive transfusion reaction</p>	
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Level II



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(0.5 credit point for laboratory training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training of basic transfusion medicine	0.3 CP	Clinical Pathology,	* Practice with mentioned practical skills below for six months in the Blood Bank unit including; ➤ interpretation of test results and related laboratory investigations ➤ Log of practical skills as mentioned below	60% of course training in Level II
	0.15 CP		➤ Attend practical teaching for at least 2 hours /week for 4 weeks	30% of course training in LEVEL II
	0.05 CP		➤ Formative assessment	10% of course training in level II
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Basic transfusion medicine practical skills log in Level II

1- Serological tests by ELISA related to <ul style="list-style-type: none"> Infectious complications of transfusion 	45 each; i.e. Level C 5 Level B 10 Level A 30	2- Serological tests by chemo luminescence related to <ul style="list-style-type: none"> Infectious complications of transfusion 	45 each; i.e. Level C 5 Level B 10 Level A 30
3- Red cell blood group antigens: biochemistry, genetic inheritance, <ul style="list-style-type: none"> immunogenicity, clinical significance, common phenotypes cross match	30 Level A	4- Blood Group Serology/Biochemistry	30 each Level A
5- Lab safety: <ul style="list-style-type: none"> Specimen Transport Sample handling and storage in laboratory Disposal of clinical waste High Risk Samples How to use PPE Disposal of positive serology or NAT blood bags. Dealing of sharp sting Proper management of blood spillage 	Level A 30	6- Deal with Blood donation: <ul style="list-style-type: none"> Criteria of blood donation Donation process Post donation care 	20 each; i.e. Level B 5 Level A 15
7- Blood component preparation	Level A 40	8- Automation in blood bank	30 times Level C 10 Level B 10 Level A 20



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9-Special blood component preparation Filtered blood Irradiated blood Platelets preparation	40 times; i.e. Level C 5 Level B 10 Level A 25	8- NAT in Blood bank	60 times; i.e. Level C 10 Level B 10 Level A 40
12- Interpretation of lab results mentioned above	200 times		

*** Level of competency**

C- Observation

B- Performance under supervision

A- Independent performance



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Formative assessment

Exam	Score	Grade*	Date	Signature

***Degree**

- A- Excellent
- B- Very good
- C- Good
- D- Pass



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Postgraduate student's program Rotation in training assessment

* Name:

* Period of training From:

To:

* Site:

*Rotation

General skills	could not judge (0)	strongly disagree(1)	↩		↩		strongly agree (7)
			(2)	(3)	(4)	(5)	
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).							
Appraises evidence from scientific studies.							
Conduct epidemiological studies and surveys.							
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.							



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General skills	could not judge (0)	strongly disagree(1)	↔		↔		(6)	strongly agree (7)
			(2)	(3)	(4)	(5)		
Facilitate learning of students other health care professionals including their evaluation and assessment.								
Maintain therapeutic and ethically sound relationship with patients.								
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.								
Provide information using effective nonverbal, explanatory, questioning, and writing skills.								
Work effectively with others as a member of a health care team or other professional group.								
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.								
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.								



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General skills	could not judge (0)	strongly disagree(1)	↔		↔		(6)	strongly agree (7)
			(2)	(3)	(4)	(5)		
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								

Course 2

Emergency in Transfusion Medicine



Requirements

- **Credit points: 2 credit points for didactic (lectures, seminars, tutorial).**
- **2 credit points for clinical training.**
- **Minimal requirement: Achievement of at least 80% of didactics and clinical training.**



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Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Emergency in Transfusion Medicine	0.6 CP	Clinical pathology and anaesthesia &ICU departments	6 hours Complication of blood donation <ul style="list-style-type: none"> • immediate vasovagal • Delayed vasovagal • Chest pain • Citrate reaction • Haematoma • Painful arm • Nerve irritation • Nerve injury • Arterial puncture • Delayed bleeding • Thrombophlebitis 	<u>30%</u>
	0.6 CP		Adverse effects of blood transfusion Acute transfusion reactions <ul style="list-style-type: none"> • Haemolytic transfusion reaction • Bacterial contamination and septic shock • Transfusion associated circulatory overload • Anaphylactic reaction • Transfusion related acute lung injury 	<u>30%</u>
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Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Emergency in Transfusion Medicine	0.6 CP	Clinical pathology and anaesthesia &ICU departments	Delayed complications of transfusion <ul style="list-style-type: none"> • Delayed haemolytic transfusion reaction • Post-transfusion purpura • Transfusion associated graft-versus-host disease • Delayed complications: transfusion transmitted infections 	30%
	0.2CP		Massive transfusion reaction	10%
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Second Part



Course 3: Transfusion medicine and blood banking.



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Requirements

- ✚ Credit points: 24 credit points for didactic (lectures, seminars, tutorial).
- ✚ 116 credit points for clinical training; 20 CP in first part and 96CP in second part.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and clinical training in each rotation per year.



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Year 3(1.2 credit point for didactic)

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	1.2 CP	Clinical Pathology, Hematology unit	Year 1	5.4 % of the didactic
	0.2 CP		6 hours Blood Component Manufacturing , Storage	1.8%
	0.1 CP		1. Preparation of blood components from whole blood	0.9%
	0.1 CP		2. Products that may be collected using hemapheresis procedures	0.9%
	0.2 CP		3. Blood product anticoagulant/preservatives	
	0.2		4. Storage conditions/expiration dates for each blood component.	
	0.1		5. Preparation of components which require pooling/thawing	
	0.1		6. Special processing techniques of leukoreduction/washing/volume reduction/irradiation	
	0.2		7. Metabolic changes that occur during storage	
			8. Plasma derivatives that are prepared commercially	
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Year 1 (20 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Hematology unit	8 CP	Clinical Pathology, Hematology unit	<ul style="list-style-type: none"> ➤ Practice with practical skills for 2 month in the hematology unit including interpretation of test results and related to blood bank and transfusion medicine investigations as mentioned below ➤ Log of practical skills as mentioned below 	40% of unit training in year 1
	2 CP		<ul style="list-style-type: none"> ➤ Attend for at least 6 months in the Blood bank 	10% of training in year 1
	1 CP		<ul style="list-style-type: none"> ➤ Attend for at least one month in women health hospital. Blood bank women health hospital. 	5% of training in year 1
	6 CP		<ul style="list-style-type: none"> ➤ Attend night shift in the Blood bank. (From 2pm to 8am) 4-6/month for 12 month (according to No. of residents). 	30% of training in year 1
	2 CP		<ul style="list-style-type: none"> ➤ Attend practical teaching 2 hours /week for at least 8 weeks 	10% of training in year 1
	1 CP		<ul style="list-style-type: none"> ➤ Formative assessment 	5% of training in year 1
	Student signature			



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Hematology practical skills log in the first year

Practical skill	Number	Practical skill	Number
1- Sampling & Blood handling & donation - Techniques - Precautions -Anticoagulants	20 times each; i.e. Level B 5 Level A 15	2- blood banking • ABO grouping • RH typing • Cross matching • Coombs' test	70 times Level A 60
3- Preparation of blood components from whole blood	Level A 20	4- Preparation of blood components using hemapheresis procedures	20 times; i.e. Level C 5 Level B 5 Level A 10
5- Preparation of components which require pooling/thawing	30 times; i.e. Level C 5 Level B 5 Level A 20	6- Special processing techniques of leukoreduction/washing/volume reduction/irradiation	Level A 20
7- Plasma derivatives that are prepared commercially	10 each; i.e. Level C 10 Level B 10	8- Metabolic changes that occur during storage	15 each; i.e. Level C 5 Level B 5 Level A 5
9- Dealing with complication of blood transfusion as incompatible blood	Level C 5 Level B 5	10-	
9-Quality control in blood bank Techniquial and quality control according to standard requirements	Level C5 Level B 10	10- Proficiency testing in blood bank	Level C 5 Level B 5

* **Level of competency**

C- Observation

B- Performance under supervision

A- Independent performance



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Year 2(13 credit point for didactic)

Name of the Unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	13 CP	Clinical Pathology, Hematology unit	Year 2	59.1 % of the didactics
	1.8 CP 0.9 CP 0.9 CP		18 hours Therapeutic apheresis Principles of apheresis technology Indications (ASFA Categories), risk and benefits Replacement fluids Monitoring of patient and central venous canula III-Stem cell collection & processing Donor preparative regimen Collection techniques and complications Cell count targets and engraftment monitoring Processing and storage Collection & processing	8.2% of didactics unit
	3.2 CP		32 hours Blood transfusion in special conditions Transfusion therapy in special patients <ul style="list-style-type: none"> • Hematology / Oncology • Pediatric / neonatal • Obstetric including intra uterine • Cardiac surgery with CPB 	23.6%



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Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	13.0CP	Clinical Pathology	Year 2	59.1 % of the didactic of unit 2
	5.2 CP		52 hours	23.6% of didactics unit
	0.6 CP		<ul style="list-style-type: none"> Burn patients & Trauma patients 	
	2.6 CP		<ul style="list-style-type: none"> Transplantation: Stem cell / Bone marrow, Liver, Kidney, other 	
	1.0 CP		<ul style="list-style-type: none"> Hemolytic disease of new born 	
	3.0 CP		<ul style="list-style-type: none"> Pathophysiology Causative blood group antibodies 	
			Monitoring, Treatment & Prophylaxis	
	0.8 CP		- Formative assessment	3.7%
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Year 2(29 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Hematology unit	14 CP	Clinical Pathology, Hematology unit	<ul style="list-style-type: none"> ➤ Practice with practical skills for at least 2 months in the Blood Bank unit including interpretation of test results and related laboratory investigations as mentioned below ➤ Log of practical skills as mentioned below 	48.3% of unit training in year 2
	5CP		<ul style="list-style-type: none"> ➤ Attend night shift in the Blood bank (From 2pm to 8am) 4-6/month for 12 months(according to No. of residents). 	20.7% of unit training in year 2
	2 CP		<ul style="list-style-type: none"> ➤ Attend for at least 2 months in the Blood bank 	6.9 % of unit training in year 2
	2 CP		<ul style="list-style-type: none"> ➤ Attend for at least one month Blood Bank women health hospital) 	6.9% of unit training in year 2
	4 CP		<ul style="list-style-type: none"> ➤ Attend practical teaching 2 hours /week for at least 8 weeks 	13.7% of unit training in year 2
	1 CP		<ul style="list-style-type: none"> ➤ Formative assessment 	3.5% of unit training in year 2
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Transfusion Medicine practical skills log in the second year			
Practical skill	Number	Practical skill	Number
1- blood banking <ul style="list-style-type: none"> • ABO grouping • RH typing • Cross matching • Coombs' test 	20 times Level A	2- Preparation of blood components from whole blood	20 times Level A
3- Preparation of components which require pooling/thawing	30 times Level A	4- Preparation of blood components using hemapheresis procedures	20 times Level A
5- Plasma derivatives that are prepared commercially	30 times Level A	6- Metabolic changes that occur during storage	20 times Level A
7- Dealing with complication of blood transfusion as incompatible blood	30 times each; i.e. Level B 5 Level A 25	8 Quality control in blood bank <ul style="list-style-type: none"> • Techniquial and quality control according to standard requirements 	Level A 5 Level B 5

* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance



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Year 3(9.8 credit point for didactics)

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
	9.8 CP	Clinical Pathology, Hematology unit	Year 3	35.5% of the didactics unit 2
	6.8 CP		<ul style="list-style-type: none"> • Hemoglobinopathies Classification, Pathophysiology, Diagnosis & Transfusion therapy • Immune hemolytic anemia Warm, Cold, Drug induced hemolytic anemia Comprehensive investigations for haemolytic anemia Compatibility testing issues Compatibility testing issues Special transfusion needs • Thrombocytopenia Immune thrombocytopenic purpura Thrombotic microangiopathies (Including HUS-TTP and Disseminated Intravascular Coagulopathy) Post transfusion purpura Fetal and neonatal thrombocytopenia HIV, HCV & other infection associated thrombocytopenia Drug induced immune and 	23.6% of the didactics unit



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			<p>nonimmune thrombocytopenias Heparin induced thrombocytopenia Aplastic, myeloablative and post-transplant thrombocytopenias</p> <ul style="list-style-type: none"> • Platelet refractoriness Recognition and evaluation Calculation of CCI and platelet recovery Principles of HLA typing and platelet cross match Selection of appropriate platelet product • Neutropenia Classification, etiology and treatment Granulocyte transfusion • Clotting factor disorders Principle of hemostasis & coagulation Lab tests of coagulation status Selection and dosage of factor preparations Management of patients with inhibitors <p>Transfusion alternatives Synthetic and natural volume expanders Hemoglobin solution, Perfluorochemicals, Fibrin glue, Hemostatic agent Autologous blood Preoperative autologous deposit</p>	
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			Perioperative blood salvage Acute normovolemic hemodilution	
Student signature			Principle coordinator signature	Head of the department signature



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Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	4 CP	Clinical Pathology, Hematology unit	Year 3	35.5% of the didactic of unit 2
	<u>1.0 CP</u>		10 hours	10% of the didactics unit
	0.6 CP		Blood Bank Management Quality assurance and quality control 4.2.20.2 Automation in Transfusion Medicine Equipment procurement Writing policies and procedures Blood inventory management Maximal surgical blood order schedule Hospital transfusion committee	
	0.2 CP			
	0.2 CP			
	0.1 CP			
	0.2 CP		- Formative assessment	1.9%
Student signature			Principle coordinator signature	Head of the department signature



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Year 3(67 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Hematology unit	35 CP	Clinical Pathology, Hematology unit	<ul style="list-style-type: none"> ➤ Practice with practical skills for 6 month in the blood Bank unit including interpretation of test results and related laboratory ➤ Log of practical skills as mentioned below 	48.3% of unit training in year 3
	16 CP		<ul style="list-style-type: none"> ➤ Attend night shift in the Blood bank (From 2pm to 8am) 4-6/month for 12 months (according to No. of residents). 	20.7% of unit training in year 3
	5 CP		<ul style="list-style-type: none"> ➤ Attend for at least one month in the Blood bank 	6.9 % of unit training in year 3
	5 CP		<ul style="list-style-type: none"> ➤ Attend for at least one month in the blood bank women health hospital) 	6.9% of unit training in year 3
	5 CP		<ul style="list-style-type: none"> ➤ Attend Practical teaching 2 hours /week for at least 8 weeks 	12.8% of unit training in year 3
	1 CP		<ul style="list-style-type: none"> ➤ Formative assessment 	3.5% of unit training in year 3
	Student signature			



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Transfusions medicine practical skills log in third year			
Practical skill	Number	Practical skill	Number
1 - Preparation of components which require pooling/thawing and Examination	20 times Level A	2- processing techniques of leukoreduction/washing/volume reduction/irradiation	20 times; i.e. Level A
3- Plasma derivatives that are prepared commercially	20 times Level A	4-- Dealing with complication of blood transfusion as incompatible blood	20 times; i.e. Level A
5- Quality control in blood bank Techniques and quality control according to standard requirements	10 times Level A	6-10- Proficiency testing in blood bank	2 times each;i.e. Level A

* **Level of competency**

C- Observation

B- Performance under supervision

A- Independent performance



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Night Shift at Blood Bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
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37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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Night Shift at Blood Bank

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Night Shift at Blood bank

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Night Shift at Blood Bank

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Night Shift at Blood Bank

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Night Shift at Blood bank

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Formative assessment

Exam	Score	Grade*	Date	Signature

*Degree

- A- Excellent
- B- Very good
- C- Good
- D- Pass



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Postgraduate student's program Rotation in training assessment

* **Name:**

* **Period of training From:**

To:

* **Site:**

* **Rotation**




General skills	could not judge (0)	strongly disagree(1)	(2)		(3)		(4)		(5)		(6)	strongly agree (7)
			(2)	(3)	(4)	(5)						
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).												
Appraises evidence from scientific studies.												
Conduct epidemiological studies and surveys.												
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.												



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General skills	could not judge (0)	strongly disagree(1)	 (2) (3)		 (4) (5)		 (6)	strongly agree (7)
			Facilitate learning of students other health care professionals including their evaluation and assessment.					
Maintain therapeutic and ethically sound relationship with patients.								
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.								
Provide information using effective nonverbal, explanatory, questioning, and writing skills.								
Work effectively with others as a member of a health care team or other professional group.								
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.								
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.								



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General skills	could not judge (0)	strongly disagree(1)	(2) (3)		(4) (5)		(6)	strongly agree (7)
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



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Elective Course 1

Requirements

- + Credit points: 2 credit point.
- + Minimal rate of attendance 80% of lectures and 80% of training



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الرسالة العلمية

عنوان الرسالة:

عربي: _____

انجليزي: _____

المشرفون: _____

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..... ٢-

..... ٣-

..... ٤-

تاريخ القيد لدرجة: / /

تاريخ التسجيل الموضوع:

المتابعة الدورية:

التاريخ	ما تم انجازه من بروتوكول البحث	المتبقي	توقيع المشرفين



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Course Structure Mirror	Responsible (Course) Coordinator Name:	Signature	Date
First Part			
Course 1: Basics of Transfusion Medicine			
Course 2: Emergency in Transfusion Medicine			
Second Part			
Course 3: Transfusion medicine and blood banking			
- Elective Course(s) Certificate (s) Dates:			
- Master Degree Thesis Acceptance Date:			
-- Fulfillment of required credit points prior to final examination			
Transfusion medicine M Sc Degree Principle Coordinator:			
Date approved by Clinical Pathology Department Council:			

يعتمد ،
رئيس القسم
أ.د./



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كراسة الأنشطة
اللازمة لحصول الطبيب المقيم علي
درجة الماجستير في
طب نقل الدم
2022-2023