

Program specification for Diploma Degree in blood banking and blood transfusion Code: 1705600

University: Alexandria

Faculty: Medical Research Institute

Program Specification

A- Basic information

1- Program title: Diploma Degree in blood banking and blood transfusion

2- Program type: **single** **double** **multiple**

3- Department(s): Hematology Department

4- Coordinator: Prof Dr Shereen EL-Maghraby

5- External evaluator(s): Prof Dr Basma EL Gammal professor of Clinical pathology- National Cancer Institute. Cairo University

6- Last date of program specification approval: 5/6/2014

B- Professional Information

1- Program aims:

- 1- List the quality standards, fundamentals of ethical & legal practice skills in blood banking and transfusion
- 2- Recognize and interpret indications of component transfusion
- 3- List cell separators and different blood bank equipment.
- 4- Recognize basic knowledge of immunology
- 5- Recognize and interpret immunoematology
- 6- Recall basic knowledge of hematopoiesis and hemostasis.
- 7- List the production, function and fate of hematopoietic cells.
- 8- Describe basic practical skills and introduction to lab technology in blood banking.
- 9- Apply lab technology to clinical blood transfusion
- 10- Recognize infectious agents transmitted by transfusion
- 11- List knowledge about disinfection and sterilization and hospital acquired infection

12-List different types of transfusion and interpret the indications for plasmapheresis and cytapheresis

13- Examine chest, heart and abdomen and can discuss patient sheet.

2- Intended learning outcomes (ILOs)

a- knowledge and understanding:

a1-Recall the indications of blood transfusion and list the causes of exchange transfusion

a2- List the basic concepts of immunology and immune disorders and Discuss the regulation of the immune system

a3-Recall methods of disinfection and sterilization

a4- Recall hematopoietic cell structure and function and production and fate of hematopoietic cells.

a5-List the blood bank equipments and recall lab technology used in clinical blood transfusion and blood grouping

a6-List the infectious agents transmitted by transfusion and list antimicrobial and antiviral drugs

a7-Discuss the fundamentals of ethical & legal practice

a8-List the quality standards of the practice

b- Intellectual skills:

b1- Assess the indications of cell separators and solve problems

b2 –Evaluate the role of immune response and interpret the disordered functions of immune system

b3-Illustrate the indications of plasmapheresis & cytophoresis

b4 –Evaluate the steps done in different transfused patients.

b5- Analyze different laboratory tests in blood banking

b6-Interpret the results of different cultures

b7-Evaluate professional risks

c- professional and practical skills:

c1- Perform all basic and required professional skills of different blood bank techniques as blood grouping ,cross matching

c2- Perform coombs test and use technology to advance practice.

c3- Perform proper clinical examination

d- General and transferable skills:

d1- Develop skills in self-appraisal, learning and seek continuous learning

d2- Develop team work skills, work as team leader as well as a member in larger teams.

d3- Use information technology to improve professional practice and use different sources of information to obtain data.

d4- Develop skills in communication using all methods. Manage time effectively

3- Academic standards

3a - External references for standards (Benchmarks)

Generic Academic Reference Standards of the National Authority for Quality Assurance and Accreditation of Education (NAQAAE)

Adopted at MRI council 12/2/2014 and re –adopted at 15/1/2023

Last date of Academic References standards (ARS) approval by institute 15/1/23: Council

3b -Comparison of provision to selected external references

Comparison between Generic Academic Standards of NAQAAE and ARS of diploma of blood banking and blood transfusion

Generic Academic Standards of NAQAAE	ARS of diploma of blood banking and blood transfusion
A1-Basic facts, theories, of the specialty and related subjects/ fields	a1- Recall the indications of blood transfusion and list the basic concepts of immunology a2- List the blood bank equipments and recognize lab technology used in clinical blood transfusion and blood grouping a3- Recognize basis of disinfection and sterilization and list the infectious agents transmitted by transfusion a4- Discuss hematopoiesis
A2-Fundamentals of ethical & legal practice	a5- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice.
A3 -Quality standards of the practice	a5- Recognize the fundamentals of ethical & legal

	practice and know the quality standards of the practice.
A4- Effect of the specialty practice on the environment including rules for environmental conservation	a2- List the blood bank equipments and recognize lab technology used in clinical blood transfusion and blood grouping a3- Recognize basis of disinfection and sterilization and list the infectious agents transmitted by transfusion
B1- Determine, analyze & prioritize problems	b2 –Interpret the role of immunohematology in blood banking b3- Examine patients and make sheet and interpret the results of different cultures
B2- Solve common problems effectively	b4- Evaluate professional risks and solve problems in clinical transfusion and appraise research.
B3- Critically appraise researches and articles	b4- Evaluate professional risks and solve problems in clinical transfusion and appraise research.
B4-Evaluate professional risks	b4- Evaluate professional risks, solve problems in clinical transfusion and appraise research.
B5- Make decisions to solve professional problems according to available data	b1- Analyze the indications of cell separators and different laboratory tests in blood banking and solve problems.
C1- Practice basic professional skills (clinical/practical & procedural skills) competently	c1- Perform some blood bank techniques as cross matching and Coombs test and write reports c2- Perform proper clinical examination
C2- Write reports related to the profession (Patient records, self appraisal/ audit reports etc...)	c1- Perform some blood bank techniques as cross matching and Coombs test and write reports
D1- Communicate effectively using all methods	d4- Develop skills in communication using all methods. Manage time effectively.
D2- Use information technology to improve his/her professional practice	d3- Use information technology to improve professional practice and use different sources of information to obtain data.
D3- Practice self-appraisal and determines his learning needs	d1- Develop skills in self-appraisal, learning and seek continuous learning.
D4- Use different sources of information to obtain data	d3- Use information technology to improve professional practice and use different sources of information to obtain data.

D5- Work in teams D6- Manage time effectively	d2-- Develop team work skills, work as team leader as well as a member in larger teams. d4- Develop skills in communication using all methods. Manage time effectively.
D7- Work as team leader in situations comparable to his work level	d2- Develop team work skills, work as team leader as well as a member in larger teams.
D8- Learn independently and seek continuous learning	d1- Develop skills in self-appraisal, learning and seek continuous learning

4- Curriculum structure and contents

4.a program duration: minimum 1.5 years

4.b program structure:

4.b.i- No. of hours per week in each year/semester:

Semester	Core courses	Elective courses
	No. of hours	No. of hours
First semester	9CH	1 CH
Second semester	8 CH	2CH
Third semester	8 CH	2CH

4.b.ii- No. of credit hours Lectures 23 Practical 7 Total 30

 Compulsory 25 Elective 5 Optional 0

4.b.iii- No. of credit hours of specialized courses No. 18 % 60

4.b.iv- No. of credit hours of other courses No. 12 % 40

b.v- Program levels (in credit-hours system) N/A

5- Program Courses

5.1- Compulsory (25 hours)

Code No.	Course Title	No. of credit hours		No. of hours /week
			Lecture	Practical
1705601	Blood banking	4	3	2
1705711	Hematological Immunology	4	3	2
1706621	Hematological Microbiology	4	2	4
1705603	Laboratory technique	4	3	2
1705604	Clinical transfusion	4	3	2
1715621	Internal Medicine	3	2	2
1705605	Hematological cell biology	2	2	
	Total	25	18	14

5.2- Elective I (5 hours)

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Practical
1716620	Infection control	1	1	
1721620	Medical statistics	1	1	
1708620	Immunology	1	1	
1710620	Pathology	1	1	
1704620	Pharmacology	1	1	
1705610	Experimental Hematology	1	1	

5.3- Elective II

5.4- Optional – (none)

6- Program admission requirements

- Graduate students with a M.B.Ch.B of Medicine, B.Sc of nursing

7- Teaching and learning methods

Lectures and seminars

8- Regulations for progression and program completion

For the progression and completion of the program to obtain the degree of **Diploma in blood banking and blood transfusion**, the student must complete 30 credit hours with CGPA of at least C+.

9- Evaluation of Students enrolled in the program.

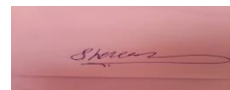
Tool evaluation	Intended learning outcomes being assessed
Written	ILOs a & b
Practical	ILOs c
Oral	ILOs a ,b & d
Semester Work	ILOs b & d

Evaluation of the Program

Evaluator	Tool	Sample
1- Senior students	Questionnaire	40%
2- Alumni	Questionnaire	10%
3- Stakeholders (Employers)	Meeting	10%
4- External Evaluator(S) External Examiner (s)	REPORT	Prof Dr Basma EL Gamal

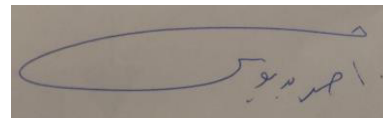
Program coordinator:

Name: Prof Dr : Shereen EL-Maghraby. Signature:



Department Head:

Name: Prof Dr: Ahmed Bedewy Signature:



Date of Department Council Approval: 31-10-2023

Matrix for aims with ILOS

	A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	B 1	B 2	B 3	B 4	B 5	B 6	B 7	C 1	C 2	C 3	D 1	D 2	D3	D 4
1					x		X	X								x			x			
2											x								x	x		
3									x		x									x		
4-		x																				
5										x							x				x	x
6-				x																x		
7-				x																		
8 -					x			x						X		x						x
9-														X		x						
10-						x																
11-			x			x									x					x	x	
12-	x										x		x									
13												x						X			x	x

Course matrix vs ILOS

Title of the course	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	D1	D2	D3	D4
Blood banking	x						X		x		x		X			x			x		x	X
Hematological Immunology		x								x			X			X	x			x		X
Hematological Microbiology			x			x								x		x			x		x	
Laboratory technique					x			x					x		x		x		x		x	
Clinical transfusion	x																	x	x	x	x	
Clinical Internal Medicine												X						x	x			X
Cell Biology				x															x		x	

Teaching and learning methods vs courses matrix

	Course code 1705601	Course code 1705603	Course code 1705604	Course code 1705605	Course code 1705711
Lecture	X	X	X	X	X
Practical/Clinical	PRACTICAL	PRACTICAL	PRACTICAL		PRACTICAL
Brainstorming					
Discussion Groups					
Problem Solving					
Case Study					
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.					
Training Workshops					
Self-Directed Learning					
e-learning					
Project					
Seminars	x	x	x	X	x

***Generic Attributes * Program Attributes * Program Aims**

Generic Graduate Attributes of NAQAAE	Graduate Attributes of Diploma in blood banking and blood transfusion By the end of this program, Graduate should be able to	Program Aims
Apply specialized knowledge related to professional skills in the field of specification.	Apply specialized knowledge related to lab technology in the field of blood banking	Apply lab technology to clinical blood transfusion
Identify professional problems in the field of specification and propose solutions to them.	Identify infectious agents in the field of blood transfusion and propose solutions to prevent.	Recognize infectious agents transmitted by transfusion
Master professional skills in the field of specification.	Master professional skills in quality standards, ethical and legal practice in blood banking and transfusion	List the quality standards , fundamentals of ethical & legal practice skills in blood banking and transfusion
Use appropriate technology means in his/her professional practice of the field of specification.	Use basic practical skills in h the field of blood banking	Describe basic practical skills and introduction to lab technology in blood banking
Communicate and lead work teams in a systematic, professional manner.	Communicate and lead work teams in quality standards , fundamentals of ethical & legal practice skills in blood banking and transfusion	List the quality standards , fundamentals of ethical & legal practice skills in blood banking and transfusion
Take professional decisions in case of available information.	Take professional decisions in immunoematology	Recognize and interpret immunoematology
Use available resources efficiently.	Use available instruments efficiently	Recognize and interpret indications of component transfusion
Relate his/her studies to community development and environmental preservation.	Relate basic studies to community development	Recognize basic knowledge of immunology
Act in a manner that reflects a commitment to integrity, credibility, professionalism, and accountability.	Act in a manner that reflects a commitment to blood bank equipments	List cell separators and different blood bank equipments
Realize the need for self-development and engaging in continuous learning.	Realize the need for continuous learning in hematopoiesis and hemostasis	Recall basic knowledge of hematopoiesis and hemostasis