



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 in blood banking and blood transfusion

2- Program type: single double multiple

3- Department(s) : Hematology Department

4- Coordinator : Prof Dr Amal Ghanem

5- External evaluator(s): Prof Dr Khaled Emara professor of Hematology-National Cancer Institute. Cairo University

6- Last date of program specification approval: 8/1/2017

B- Professional Information

1- Program aims:

By the end of the program the students should

1-Know quality standards , fundamentals of ethical & legal practice skills in blood banking and transfusion

2-Recognize and interpret indication of component transfusion

3-Know about cell separators and different blood bank equipments

4-Recognize basic knowledge of immunology

5- Recognize and interpret immunohematology

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- Competent in 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)



**Date of Academic Reference standards (ARS) approval by Institute Council:
12/2/2014**

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	<p>a1-Recall the indications of blood transfusion and list the basic concepts of immunology</p> <p>a2- List the blood bank equipments and recognize lab technology used in clinical blood transfusion and blood grouping</p> <p>a3-Recognize basis of disinfection and sterilization and list the infectious agents transmitted by transfusion</p> <p>a4-Discuss hematopoiesis</p>
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	<p>a2- List the blood bank equipments and recognize lab technology used in clinical blood transfusion and blood grouping</p> <p>a3-Recognize basis of disinfection and sterilization and list the infectious agents transmitted by transfusion</p>
B1- Determine , analyze & prioritize problems	<p>b2 –Interpret the role of immunohematology in blood banking</p> <p>b3- Examine patients and make sheet and interpret the results of different cultures</p>



B2- Solve common problems effectively	b4- Evaluate professional risks and solve problems in clinical transfusion
B3- Critically appraise researches and articles	- Critically appraise researches and articles Through student assignments
B4-Evaluate professional risks	b4- Evaluate professional risks
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- Assess different blood bank techniques and perform certain techniques 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



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 stechnique	4	3	2
1705604	Clinical transfusion	4	3	2
1715621	Internal Medicine	3	2	2
1705605	Hematological cell biology	2	2	

5.2- Elective I (5 CH)

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 (add no. of hours)

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Practical



5.4- Optional – (none)

6- Program admission requirements

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

7- 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+.

8- Evaluation of program intended learning outcomes

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 Students enrolled in the program

Evaluator	tool	Sample
1- Senior students	Interview	40%
2- Alumni	Interview	10%
3- Stakeholders (Employers)	Interview	10%
4- External Evaluator(S) External Examiner (s)	REPORT	Prof Dr Khaled Emara professor of Hematology-



		National Cancer Institute. Cairo University
5- Other		

Dates of Previous editions/revisions:

Editions/Revisions Number	Date
Edition no.1	2009
Edition no. 2	2011
Edition no.3	5/6/2014
Edition no.3, revision no.1	12/2014
Edition no.3, revision no.2	10/2016
Edition no.3, revision no 3	9/2017

Program coordinator :

Name: Prof Dr Amal Ganem.

Signature

Department Head:

Name: Prof Dr Amal Ganem.....

Signature:

Date of Department Council Approval: 6/9/2017



Matrix for programme aims with ILOS : Programme title: Diploma in blood banking and blood transfusion

	A 1	A 2	A 3	A 4	A 5	A 6	A 7	A8	B1	B 2	B3	B 4	B 5	B 6	B7	C1	C2	C3	D1	D2	D3	D4
1- Know quality standards , fundamentals of ethical & legal practice skills in blood banking and transfusion					x		X	X								x						
2- Recognize and interpret indication of component transfusion											x											
3- Know about cell separators and different blood bank equipments									x		x											
4- Recognize basic knowledge of immunology		x																				
5- Recognize and interpret immunohematology										x							x					
6- Recall basic knowledge of hematopoiesis and hemostasis.				x																		
7- List the production , function and fate of hematopoietic cells				x																		
8 - Describe					x			x						x		x						



basic practical skills and introduction to lab technology in blood banking																				
9- Apply lab technology to clinical blood transfusion											x		x							
10- Recognize infectious agents transmitted by transfusion						x														
11- List knowledge about disinfection and sterilization and hospital acquired infection			x			x							x							
12- List different types of transfusion and interpret the indications for plasmapheresis and cytophoresis	x									x		x								
13-- Examine chest, heart and abdomen and can discuss patient sheet											x								X	

D1,D2,D3,D4 are fulfilled through semester work



Course matrix vs ILOS

Title of the course	A1	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	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	
Pharmacology						x															x		X
Pathology		x				x										X						x	
Experimental hematology				x															x			x	
Infection control						x									x				x				
Immunology		x								x											x		



Medical statistics								X							X						X	X
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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					
Field Training					
Role playing					
Training Workshops					
Self-Directed Learning					
e-learning		١٣			
Project					
Seminars	x	x	x	X	x



Matrix for programme ILOs and ARS of Diploma in blood banking

Programme ARS	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	D 3	D 4
A1	x	x																				
A2					x																	
A3			x			x																
A4				x																		
A5							x	x														
B1									x		x		x									
B2									x	x			x									
B3												x		x								
B4															x							
C1																x	x					
C2																		x				
D1																			x			
D2																				x		
D3																					X	
D4																						x