

Cairo University

Faculty of Medicine



Program Specification for Blood Transfusion Medicine **Master Degree:**

Program type: joint by clinical pathology and clinical hematology departments

Program code: TMED 822

Department offering the program: Clinical and chemical Pathology Department

Total credit points: 150

Major or minor element of program : Major

Academic year: 2017/2018

Program Coordinators: Prof Nermeen Ahmed Eldesoukey

External evaluators : DR Magdy EI Ekiaby
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I. Program aims

By the end of the program of Blood Transfusion specialized M.Sc. degree, the candidate will be a trained specialist in Transfusion Medicine, with the aim of dealing properly with all aspects of transfusion services and being able to manage efficiently blood centers in hospitals.

II. Intended learning outcomes of program (ILOs)

a) Knowledge and understanding: By the end of the program the candidate should be able to;

1. Discuss basic blood group serology
2. Define the basic strategies in different blood bank processes and activities
3. Describe proper techniques used in all blood bank units.
4. Outline the role of blood banks in cord blood and hematopoietic stem cell transplantation
5. Describe the major aspects for management of blood banks
6. Define the application of information management systems/requirements needed for banking facility.
7. Describe the quality assurance and quality improvement for all activities in blood banks.
8. Evaluate the ethical and medico legal issues involved in blood banking.

b) Intellectual skills: By the end of the program the candidate should be able to;

1. Apply knowledge of the antigen and antibody characteristics of blood group systems in procedures to detect and identify them.
2. Apply the theoretical concepts of immunological and serological techniques to guarantee safety of blood transfusion

3. Utilize the theoretical concepts in resolving technical problems within different tests.
4. Recognize, manage and prevent reactions to transfusion
5. Organize laboratory work areas and tasks in such a way as to accomplish laboratory assignments and unknowns efficiently in preparing to meet patient needs.
6. Establish work habits and ethics which represent an understanding of the behaviors needed to provide optimum care for the patient population.
7. Monitor hospital transfusion practices compared to institutional, national or international benchmarks
8. Review ongoing quality control, proficiency testing, and competency evaluation activities
9. Actively lead a hospital transfusion committee to facilitate communication between those involved with transfusion
10. Recommend and perform transfusion practice audits
11. Participate in continuing education program for technologists, physicians, providers within the department and institution.

c) Professional and practical skills: By the end of the program the candidates should be able to;

1. Phenotype blood for other blood group systems
2. Screen blood for the presence of antibodies, then to identify these antibodies.
3. Cross match recipients and donor samples
4. Perform direct antiglobulin test
5. Perform venesection in donation
6. Set apheresis session(donation and therapeutic)
7. Screen blood and blood components for Blood born infections
8. Prepare standard blood components
9. Design check lists for quality control

d) General and transferable skills: By the end of the program the candidates should be able to;

1. Demonstrate professional behavior through working both independently and in groups to solve problems and perform analyses
2. Internalize social values and behaviors to permit him/her to function effectively with culturally and individually diverse peers to create an effective work environment.

III. Academic standards.

1. Academic reference standers: The academic standers of anatomy program m is adopted and accredited by the departmental council
2. External References for Standards:

The program content is based on the requirements of the Accreditation Council on Graduate Medical Education (ACGME) and the ASH Executive Committee recommendations for curriculum requirements in the hematology subspecialty of BLOOD TRANSFUSION MEDICINE

IV. Program admission requirements.

According to the Clinical Pathology Department, all applicants for Blood Transfusion specialized M.Sc. degree should have M. Sc. degree in Clinical and Chemical pathology , general medicine, anesthesia, clinical hematology or pediatrics , which counts for 70 Credit points in addition to twenty credit points for the thesis only if it is in the transfusion medicine specialty.

V. Program structure and contents.

Program duration: 18 months.

Program structure:

Candidate should fulfill the following:

Compulsory courses 1½ academic years (45 weeks Starts October) **12 credit points**

Formed of 3 main courses

1	Basics of Immune-hematology (blood group serology and biochemistry)	6 credit hours
2	Basics of Transfusion medicine and blood banking	5 credit hours
3	Blood transfusion in special conditions	1 credit hour

Scientific activities

3 credit points

Practical training

45 credit points

Master Thesis:

20 credit points

Practical Training Program

This will include 2 components:

- A. Instructed hands-on practical sessions:** once weekly; 4 hours each for a total of 100 hours at a blood bank or a clinical hematology department. **(15 credit hours).**
- B. Mentored internship of 6 months:** full time (5 days/day) appointment at a blood bank/transfusion service. **(30 credit hours).**

Master Thesis

All Blood Transfusion M.Sc. degree students should prepare a thesis in the field of Transfusion Medicine. The department and the ethical committees must approve the protocol of the research. The thesis (should / may) include a review part and a research part. The thesis is to be supervised by one or more senior staff members and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee of three professors including one of the supervisors and an external professor.

Thesis of the M. Sc. degree in Clinical and Chemical pathology may be accounted only if it is in the transfusion medicine specialty and will count for 20 Credit Points.

Scientific Activities:

The students should participate in the scientific activities of the departments such as:

1. Journal club
2. Seminars (including recent topics and controversial issues).
3. Scientific meetings arranged by the department
4. Attendance of Thesis discussions
5. Workshops and conferences

Each activity is monitored and given credit points registered in a special section in the residency-training logbook. The student should collect the required points before allowed to sit for final exam.

IV. Teaching methods:

1-lectures:

2-Tutorials

- Slides /data show
- Discussion
- Clinical meetings departmental / interdepartmental

3-Presentations

- Including clinical case presentations

V. Teaching and learning facilities:

Lecture halls.

Rooms for small groups

Audio-visual aids (data-show, slide projection).

List of references

- Course notes
- Recommended books
 1. Egyptian Ministry of Health, Egyptian National Blood Transfusion Standards
 - 2 **Mollison's Blood Transfusion in Clinical Medicine** ISBN-13: 978-1405199407
ISBN-10: 1405199407
 - 3 Standards for blood banks and transfusion services,AABB, ISBN-13: 978-1563958380
ISBN-10: 1563958384
 - 4 The clinical use of blood World Health Organization (WHO).
<http://www.who.int/bloodsafety/en/>

VI. Assessment:

Supervision & Monitoring of the Training Program:

According to the Faculty of Medicine, Cairo University Bylaws for specialized master training program, professors carry continuous assessment during the program. A training program logbook will be kept for each student to document all his/her, laboratory activities as well as his/her participation in different scientific activities. The head of the department should allow the students to undergo the examination when they complete their training program and collect the credit points needed.

Attendance criteria:

The prerequisite for entry to the final examination is 75% attendance of the lectures as shown in the attendance book.

Assessment tools:

- a Written examination
- b Oral examination
- c Practical examination

Assessment schedule:

Two written examinations, oral examination and clinical/practical examination

Written exam+ MCQs will be held in 2 days:

Day 1 : Immune hematology (paper 1)

Day 2 : Transfusion medicine and transfusion in special situations (paper 2)

Day 3 : practical examination

Day 4 : oral examination

Examination description:

-Written exam:

Two written examinations (3-hours each) including long/short essay questions, and MCQ (including problem solving)

-Practical examination

-Oral examination: student is examined by a board of 2-3 professors using viva cards

Weighing of assessment:

Written examination	240 marks	(40 %)
Oral examination	120 marks	(20%)
Practical/clinical exam	240 marks	(40%)

Grading system:

1. It is mandatory to pass the two papers of the exam separately
2. Pass mark in a written exam is $\geq 60\%$, and the same for oral and practical exams

VIII. Evaluation of program intended learning outcomes:

Evaluator	Tool	Sample
1. Senior Students	Questionnaire at the end of the program	All the PG students
2. Alumni	The faculty is currently developing an Alumni office for postgraduates	Not yet determined
3. Stakeholders	A meeting will be arranged during the annual conference of the department	
4. External Evaluators	Review the program and courses Attending the final exam.	Once before implementation Bi-annual report
5. Quality Assurance unit	Annual program review	

Date of approval by department council

Signatures

Program Coordinators

Head of Department

Dr. Nermeen Eldesoukey

Dr. Azza Aboul Enein