



Faculty of Medicine
Suez Canal University

Internal Medicine Department
Program Specification- MSc

PROGRAM SPECIFICATIONS

Program Title:

Master Degree of
Hematology

Code:

IMBD



Program Specification

A- Basic Information

1- Program Title: **Master Degree of Hematology**

2- Program Type: **Single** **Double** **Multiple**

3- Department (s): **Internal Medicine Department (Clinical Hematology Unit)**

4- Coordinator: **Prof. Abd Elraouf Eldeib**
Dr. Wallaa Youssef

5- External Evaluator(s) :

6- **Date of specification approval:** The bylaws of the Master program in **Hematology** in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities in 2016.

7-**Date of specification revision approval:** September 2019.

8- **Number of credit points for this degree: 120 CP**

B- Professional Information

1- Program Aim

This program is designed to provide candidates with simple basic knowledge, comprehensive and concise lectures / tutorials concerning basics and updates in hematology disorders and skills that allow them to:

- 1.1. Appropriately deal with the patient regarding history taking and physical examination.
- 1.2. Understand etiology and pathogenesis of the common hematological disorders.
- 1.3. Study the effect of hematological diseases on other systems and the effects of other systems on hematological system.
- 1.4. Provide the students with the essential knowledge of genetics, epigenetics, bacteriology, virology and mycology and its applications in the field of hematology.
- 1.5. Choose the investigations needed for each hematological case.
- 1.6. Individualize the optimum plan of management including emergency situations.
- 1.7. Acquire skills in case presentation and discussion
- 1.8. Develop appropriate skills to carry out research.
- 1.9. Ethically behave as a researcher
- 1.10. Identify and justify the basic components of the research framework, relevant to the tackled research problem.

2- Intended Learning Outcomes (ILOs) of the program

a- Knowledge and Understanding:

By the end of this program, participants should be able to:



- a1. Describe the basic knowledge regarding the varieties of biochemical basis of most common clinical diseases related to hematology, hematopoiesis and hematopoietic growth factors and regulation of hematopoiesis.
- a2. Outline the different blood laboratory investigations, normal values, bacteriology, virology and mycology and its applications in the field of Haematology.
- a3. Demonstrate the basic knowledge of red blood cell, non-malignant leukocyte and plasma cell disorders
- a4. Describe the classification, pathogenesis, natural history, molecular biology, presentation, staging and therapeutic modalities of hematological malignancies.
- a5. Outline the natural history, presentation, diagnosis and complications of congenital and acquired coagulation and platelet disorders
- a6. Describe the pharmaceuticals and blood products available for the management of thrombotic and hemostatic disorders, their indications and side-effects.
- a7. To describe practical aspects of hematologic stem cell harvesting
- a8. To describe human blood group antigens and antibodies, principles of red blood cell transfusion, clinical considerations in platelet transfusion therapy, principles of neutrophil (granulocyte) transfusions, transfusion of plasma and plasma derivatives: plasma, cryoprecipitate, albumin, and immunoglobulins, preparation of plasma-derived and recombinant human plasma proteins, and transfusion therapy for coagulation factor deficiencies.
- a9. To study transfusion reactions to blood and cell therapy products and blood transmitted diseases
- a10. Demonstrate basic knowledge concerning dealing with special situation such as pregnancy, solid tumors and systemic diseases
- a11. Assures the quality, clinical appropriateness, and usefulness of medical interventions.
- a12. Demonstrate basic knowledge of research ethics
- a13. Demonstrate basic knowledge of biostatistics

b- Intellectual Skills

By the end of this program, participants should be able to:

- b1. Apply problem solving skills.
- b2. Interpret the different laboratory investigations, bone marrow biopsy and aspiration
- b3. Practice continuous self-learning and self-evaluation skills.
- b4. Correlate the examination, differential diagnosis and investigations to establish the diagnosis and appropriate treatment planning.
- b5. Explain planned treatment clearly to the patient
- b6. Interpret and analyze data.
- b7. Apply evidence based medicine from updated reference.
- b8. Practice critical thinking and problem solving



- b9. Formulate a research hypothesis based on evidence and apply the appropriate methods to assess the validity of this hypothesis.
- b10. Assess risk in professional practices

c- Professional and Practical Skills

By the end of this program, participants should be able to:

- c1. Interpret presenting features and conduct history and examination competently
- c2. Formulate an appropriate management plan and offer full explanation to patients
- c3. Manage complications of blood transfusion components appropriately
- c4. Evaluate monitoring of anticoagulation and advises appropriately
- c5. Provide initial management of hematological emergencies.
- c6. Write and evaluate professional reports
- c7. Evaluate different methods used in hematological diseases diagnosis

d- General and Transferable Skills

By the end of the program, participants should be able to:

- d.1 Practice presentation skills
- d.2 Evaluate subordinates, peers & program
- d.3 Argue different ideas effectively
- d.4 Manage time and resources and set priorities
- d.5 Practice effective teaching and mentor to others
- d.6 Practice working effectively within a team.
- d.7 Practice efficient information and communication technology (ict) skills
- d.8 Practice continuous self-learning skills.
- d.9 Work within a changing environment.
- d.10 Treat patients in a manner consistent with the most up-to-date information on diagnostic and therapeutic effectiveness.
- d.11 Perform self-evaluations of clinical practice patterns and practice-based improvement activities using a systematic methodology.
- d.12 Use the medical library and electronically mediated resources to discover pertinent medical information.

3- Academic Standards

- The generic Academic Reference Standards (ARS) of NAQAAE for Postgraduate (2009) [<http://naqaae.org/main/php/book/index.php>]

4- Curriculum Structure and Contents

4a- Program duration: the program lasts for a minimum of 2 academic years and maximum 5 years, as specified in the internal bylaws for postgraduate studies based on credit points system in the Faculty of Medicine, Suez Canal University approved on February 7th, 2016.



4b- Program structure:

Master Program Credit points (CP) structure:

Total needed credit points for getting master degree 120 CP

The program consists of **First part 30 CP, Thesis 30 CP, and Second part 60 CP**

1. The first part of the program: 30 CP, its duration (15 weeks) for one academic semester. It includes
 - a. A course in Research Methodology planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP.
 - b. A courses in Research ethics planned and held in the Forensic and Toxicology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
 - c. One elective course, the students should select one elective among six courses. This part includes 2 CP.
 - d. A course of applied physiology held in Physiology Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP
 - e. A course of clinical Biochemistry held in Biochemistry Department of the Faculty of Medicine, Suez Canal University. This part includes 3 CP
 - f. A course of Applied Pathology held in Pathology Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP
 - g. A course of clinical Immunology and Microbiology held in Immunology and Microbiology Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP
 - h. A course of Clinical and chemical pathology held in Clinical Pathology Department of the Faculty of Medicine, Suez Canal University. This part includes. 3 CP
 - i. A course of clinical pharmacology held in pharmacology Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP
2. Master thesis: 30 CP, not included in the total marks for master degree, the candidate has the right to register the thesis protocol after 6 months from the degree registration. The thesis defense is allowed after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.
3. The second part of the program: 60 CP, its duration (45 weeks) for 3 consecutive academic semesters. The second part comprises the specialized courses in Hematology, planned and held in the internal Medicine Department. This part lasts for 1.5 years ending by written and practical exams.

4bi- No. of hours per week: 2 CP / week which equivalent 50 hours/ week, including lectures, student prepared presentations, applied cases, self-learning and hands-on training.

4bii- No. of credit Points: the Master program is 120 Credit Points



Every credit point include 25 working hour (30% = 7 hours for face to face learning activities, and 70% =18 hours for self-learning activities).

5-Program Courses

5.1- Level/Year of Program: 1st part MSc a. Compulsory

Courses			Assessment				
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Duration	Marks		
RB	Research methodology & Biostatistics	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
IMBD01	Applied physiology	4	1	2 hours	60	20	
IMBD02	Clinical Biochemistry	3	1	1 hour	45	15	
IMBD03	Applied Pathology	4	1	2 hours	60	20	
IMBD04	Clinical Immunology & Microbiology	4	1	2 hours	60	20	
IMBD05	Clinical and chemical pathology	3	1	1 hour	45	15	
IMBD06	Clinical pharmacology	4	1	2 hours	60	20	
E	Elective Course*	2	1	1 hour	40		
Total		30 credit points			600 marks**		

***E: Student should select one course of the following as an elective course:**

One elective course has 2 CP. The students should select one elective in first part of the Master degree

E01	Evidence Based medicine	(Community Department)
E02	Scientific Writing	(Medical Education Department)
E03	Quality in Medical Education	(Medical Education Department)
E04	Infection Control	(Microbiology Department)
E05	Critical Appraisal	(Community Department)
E06	Communication Skills	(Medical Education Department)

5.2- Level/Year of Program: 2nd part MSc a. Compulsory



Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam	Continues assessment *(Portfolio)
			No of papers	Duration	Marks			
IMBD 07	Theoretical	15	2	3 hours For each paper	165 for each paper	110	330	330
	Practical training in	40						
	***Scientific activities	5						
Total		60 credit points			**1100 score			

*Portfolio scores distributed in the different parts of the portfolio and its total score included among the total mark of the second part

***Scientific activities are not included in the total marks

5.3- Thesis: A faculty senior & junior supervisor from the staff members are nominated by the department council to prepare a proposal of the thesis protocol after the selection of a subject that is complementary to the research plans of the department. Data collection, methodologies, study question, time table, ethical considerations and budget are formulated by the candidate under guidance of his supervisors into a research project. The research protocol is then peer reviewed by two different staff members who share their ideas and comments with the supervisors to reach to the final form. The research protocol is discussed then openly in one of the department councils to be approved and diverted to the faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approvals of the research protocol are then issued by the committee of post graduate studies, the Faculty and University Council to be registered. The candidate has the right to register his/her thesis protocol after 6 months from the degree registration. The first time for thesis defense after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.

N.B. Thesis represents 30 credit points not included in the total mark for master degree.

6-Program Admission Requirements

- The program accepts candidates with Bachelor degree in Medicine and Surgery with minimum good grade.



- Registration for the program opens 2 times/year, according to the internal bylaws for postgraduate studies of the Faculty of Medicine, Suez Canal University.

7- Student Assessment Methods

- 7.1 Written (MEQ)** to assess the cognitive domain.
- 7.2 MCQs** to assess the cognitive domain
- 7.3 Oral Viva Cards** to assess higher cognitive and attitude domains.
- 7.3 Observations** to assess practical and presentation skills.
- 7.4 Portfolio** to assess the cognitive, psychomotor and the affective domains.

8- Weighting of Assessments

Total marks for master degree 1700

Type of exam

First part (30 credit points= 600 mark)

- Written exam 490
- Oral exam 110
- **Total** 600

Second part (60 credit points including 5 credit points not included in the total marks =1100 mark)

- Oral exam 110
- Practical exam 330
- Written exam 330
- Portfolio 330
- **Total** 1100

9- Regulations for Progression and Program Completion

The regulations for program completion follow the regulations of Master degree of medical education in the Faculty of Medicine, Suez Canal University approved by the Supreme Council of Universities.

First part

- Passing level 60% of total marks of the exam
- At least 50% passing level of the total written exam marks

Second part

- Passing level 60% of total marks of the exam



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Passing level 60% is prerequisite for MSC degree
Thesis/Assay
Passing thesis defense is prerequisite for getting MSc. Degree

10-Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Questionnaires	Random sample of participants
2- Alumni	Questionnaires	Comprehensive sample
3- Stakeholders	Interviews	Random sample
4-External Evaluator(s) (External Examiner(s))	Attending exam. (using checklist and/or rating scale)	
5- Other		

Hematology Unit Coordinator:
Dr Wallaa Youssef

Hematology Unit Supervisor:
Prof Abd Elraouf Eldeib

Head of Internal Medicine Department
Prof. Mahmoud Elprince

Date: