



Faculty of Medicine
Suez Canal University

Physiology Department
Program Specification- MSc

PROGRAM SPECIFICATIONS

Program Title:

MSc of Physiology

Code:

PHPH



Faculty of Medicine
Suez Canal University

Physiology Department
Program Specification- MSc

University : **Suez Canal University**

Faculty(s) : **Faculty of Medicine**

Program Specification

A- Basic Information

1- Program Title: **MSc of Physiology**

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

3- Department (s): **Physiology Department**

4- Coordinator: **Assistant Prof. Sahar Greish**

5- External Evaluator(s):

Prof. Sahar Ahmed El-Sawy: Professor of Physiology department, Faculty of Medicine, Tanta University.

Prof. Bataa Mohamed El-Kafory: Professor and Head of Physiology department, Faculty of Medicine, Ain Shams University.

6- Last date of program specifications approval: **the bylaws of the MSc program in Physiology in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities on 2016.**

7- Date of program specification revision approval: **2017**

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

B- Professional Information

1- Program Aim

The overall aims of the course are that the student:

- Develop basic concepts and principles of human physiology logically and clearly to correlate and analyze physiological phenomena.
- Understand the control systems of human body and various body functions in health and disease.
- Develop knowledge concerning molecular biology and the basis of genetics.



- Design and carry out a publishable basic research plan.
- Develop practical skills in doing experiments on isolated organs, tissues, and whole animals.

2. Intended Learning Outcomes (ILOs) of the program

a- Knowledge and Understanding:

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

- a1. Apply the basic concepts, e.g. homeostasis and control mechanisms in different contexts in health and disease.
- a2. Describe the relevant values and homeostatic ranges of the physiological parameters
- a3. Use all relevant information resources to acquire and evaluate evidence-based information.
- a4. Demonstrate proficiency in evaluating and presenting findings from appropriate peer-reviewed journals.
- a5. Develop and maintain a knowledge base in the basic and clinical sciences necessary for effective consultation in Physiology.

b- Intellectual Skills

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

- b1 Interpret a given set of physiological data in the common normal and common clinical contexts
- b2 Predict the consequences of failure of homeostatic mechanisms at cellular, organ, system and whole body levels.
- b3 Under supervision, formulate a research hypothesis based on evidence and apply the appropriate methods to assess the validity of this hypothesis.
- b4 Evaluate the scientific approach and research design in a given published article in a physiology journal.
- b5 Interpret the clinical findings in terms of disturbed homeostatic mechanisms.
- b6 Apply his knowledge in physiological to solve clinical problems
- b7 Identify the physiology information required to interpret the clinical findings
- b8 Write a research article that can be submitted to a national scientific journal.

c- Professional and Practical Skills

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

- c1. Record arterial blood pressure, heart rate and ECG in experimental animals.



- c2. Assess EEG, EMG and nerve conduction velocity in human subjects.
- c3. Demonstrate types of receptors and effects of autonomic drugs on isolated perfused heart and intestine.

d- General and Transferable Skills

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

- d1. Demonstrate skills in educating colleagues and other healthcare professionals:
- d2. Choose effective modes of communication (listening, nonverbal, explanatory, questioning) and mechanisms of communication (face-to-face, telephone, e-mail, written), as appropriate.
- d3. Conduct both individual consultations and presentations at multidisciplinary conferences that are focused, clear, and concise.
- d4. Function effectively within Interdepartmental team work
- d5. Demonstrate efficient Information and Communication Technology (ICT) skills.
- d6. Communicate effectively with peers and students.
- d7. Perform effective presentation skills.
- d8. Acquire continuous self-learning skills

3- Academic Standards

3a - External References for Standards

- Generic Academic Reference Standards (ARS) for post graduate programs
- The standards of the National Authority of Quality Assurance and Accreditation in Education (NAQAAE). Website: www.naqaae.org

3b - Comparison of Provision to External References (Benchmarks)

Our benchmark is

- A combination of courses were selected from the previously mentioned programs.
- Adaptation of these courses according to the Regional and Egyptian contexts was carried out.



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:

MSc Program Credit points (CP) structure:

Total needed credit points for getting MSc 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. The first part comprises the following:
 - 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 course in Research Ethics planned and held in the Forensic & Toxicology Department of the Faculty of Medicine, Suez Canal University. This part includes **2 CP**.
 - c. One elective course has **2 CP**.
 - d. The specialized courses planned and held in the Physiology Department and other departments. It includes **22 CP**.
- 2- **MSc thesis:** 30 CP, no scores for thesis. 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 month from the date of the faculty council approval on the thesis protocol.
- 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 physiology planned and held in the Physiology Department. This part ends by written and practical exams.

3bi- No. of credit Points: the MSc program is 120 credit Point system.

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: First part of MSc (30 CP)

Courses			Assessment				
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Duration	Marks		
RBs	Research methodology and Biostatistics	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
PHPH01	Course In Basic Physiology	7	1	3 hours	110	15	25
PHPH02	Biochemistry for physiology	6	1	3 hours	75	15	30
PHPH03	Pharmacology for physiology	3	1	1 hour	40		20
PHPH04	Immunology for physiology	3	1	1 hour	40		20
PHPH05	Genetics for physiology	3		1 hour	40		20
E	one Elective course*	2	1	1 hour	40		
Total		30 credit points			600 marks**		

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

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)

**every credit point equal 20 marks



5.2- Level/Year of Program: Second part of MSc program (60 CP)

Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam	Continues assessment *(Portfolio)
			No of papers	Durati on	Marks			
PHPH06	Scieintific and theaoritcal Course in Physiology	30	2	3 hours For each paper	165 for each paper	110	330	330
	Practical training in Physiology	15						
	***Scientific activities	5 (not included in the total marks)						
Total		60 credit points			1100**marks			

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

****every credit point equal 20 marks**

*****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 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.



6- Program Admission Requirements

- 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. |
| 7.4 Observations | to assess practical and presentation skills. |
| 7.5 Portfolio | to assess the cognitive, psychomotor and the affective domains. |

8- Weighting of Assessments

Type of exam	
First part (30 credit points= 600 mark)	
• Written exam	455
• Oral exam	30
• Practical exam	115
• <u>Total</u>	600
Second part (60 credit points including 5 credit points not included in the total marks =1100 mark)	
• Written exam	330
• Oral exam	110
• Practical exam	330
• Portfolio	330
<u>Total</u>	1100

9- Regulations for Progression and Program Completion

- The regulations for program completion follow the general regulations for the Faculty of Medicine, Suez Canal University for MSc approved by the Supreme Council of Universities. The program is considered complete with the accomplishment of 2 summative assessment (for the first and the second parts) and the defense of a thesis developed and submitted for the purpose of acquiring the degree.
- **First part**
 - Passing level 60% of total marks of the exam and at least 50% passing level of the total written exam marks



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- **Second part**
 - Passing level 60% of total marks of the exam
 - Passing level 60% total of practical and oral exam
- **Thesis**
 - Passing discussion is required for MSc degree

10- Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Needs assessment questionnaires	Random sample of participants
2-External Evaluator(s) (External Examiner(s))	External audit of the program specifications	
3- Other		

Program Coordinator: Sahar Mansour Greish

Head of Department:

Prof. Amani Abd El Fatah El Baz