



Faculty of Medicine
Suez Canal University

Physiology Department
Program Specification- MD

PROGRAM SPECIFICATIONS

Program Title:

MD of Physiology

Code:

PHPH



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Suez Canal University

Physiology Department
Program Specification- MD

University : **Suez Canal University**

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

Program Specification

A- Basic Information

1- Program Title: **MD 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 MD 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: **2017-2018**

8- Number of credit points for this degree: **180 CP**

B- Professional Information

1- Program Aim

The overall aims of the course are that the student:

- Professionally analyze and correlate physiological processes and phenomena.
- Understand the cellular basis of medical physiology, the cellular level and pathophysiology of different diseases.



- Acquire an essential up-to-date knowledge in molecular biology and genetics and their role in pathophysiology of different diseases
- Critically appraise published scientific research
- Formulate a good research question and design a plan to answer it.
- Master practical skills in doing experiments on tissues, and whole animals.
- Develop practical skills in isolation and culture of different types of cells, handling different media as well as animal injection and care.
- Becomes a continuous self-learner.

2. Intended Learning Outcomes (ILOs) of the program

a- Knowledge and Understanding:

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

- a1. Describe functional organization of the human body and control of the “internal environment”
- a2. Describe the basic functions of different body systems.
- a3. Describe the cellular and molecular mechanism of functions of different body organs.
- a4. Identify the inter-relationship of the functions of different body systems
- a5. Identify the cellular basis and pathophysiology of different diseases.

b- Intellectual Skills

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

- b1. Explain the functions of different body systems, organs and tissues using cellular and molecular mechanisms.
- b2. Explain the inter-relationship of the functions of different body systems
- b3. Interpret and analyze physiological data in a given clinical situation.
- b4. Predict the consequences of failure of homeostatic mechanisms at cellular, organ, system and whole body levels.
- b5. With minimal supervision, formulate a research hypothesis based on evidence and apply the appropriate methods to assess the validity of this hypothesis.
- b6. Critically appraise the scientific literature in physiology.
- b7. Write a research article that can be submitted to a regional or international scientific journal.
- b8. Judge the level of scientific evidence to support related physiological findings.

c- Professional and Practical Skills

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



- c1. Record EMG and nerve conduction velocity in experimental animals.
- c2. Record arterial blood pressure, heart rate and ECG in human subjects.
- c3. Assess cardiac output, baroreceptor reflex sensitivity and heart rate variability in human subjects.
- c4. Assess evoked visual response and evoked auditory response pulmonary in human subjects.

d-General and Transferable Skills

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

- d1. Demonstrate knowledge of evidence-based medicine and apply its principles in practice.
- d2. Use multiple sources, including information technology, to optimize lifelong learning.
- d3. Develop personally effective strategies for the identification and remediation of gaps in medical knowledge needed for effective practice.
- d4. Use proficiency programs and try to invent new techniques to improve physiology laboratory practices.
- d5. Demonstrate proficiency in evaluating and presenting findings from appropriate peer-reviewed journals.
- d6. Work effectively in a research team.
- d7. Demonstrate organization and management skills in lab work.
- d8. Present a physiology topic or a research article to his colleagues.
- d9. Accept constructive criticism and feedback on their work
- d10. Use common computer software effectively in teaching and research.
- d11. Demonstrate skills in educating colleagues and other healthcare professionals.
- d12. Demonstrate the ability to work well with Lab. technologists and to present physiology concepts to them effectively in continuing education settings.
- d13. Conduct both individual consultations and group presentations at multidisciplinary conferences that are focused, clear, and concise.
- d14. Choose effective modes of communication (listening, nonverbal, explanatory, questioning) and mechanisms of communication (face-to-face, telephone, e-mail, written), as appropriate.
- d15. Demonstrate humane attitudes in animal handling and research work.
- d16. Apply ethical principles in performing research.

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 3 academic years and maximum 7 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:

MD Program Credit points (CP) structure:

Total needed credit points for getting MD degree 180 CP

The program consists of **First part 30 CP, Thesis 50 CP, and Second part 100 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 **8 CP**.
 - b. Two electives each one has **2 CP**. The students should select one elective which has not been selected in the Master Degree.
 - c. The specialized courses in Basic Human Physiology, planned and held in the Physiology Department. It includes **18 CP**.
- 2- **MD thesis:** 50 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 2 years from the date of the faculty council approval on the thesis protocol.
- 3- **The second part of the program:** 100 CP, its duration (75 weeks) for 5 consecutive academic semesters. The second part comprises the specialized courses in physiology planned and held in the Physiology Department. This part lasts for 2 years ending by written and practical exams.

3bi- No. of credit Points: the MD program is 180 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 MD (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	8	1	3 hours	160		
PHPH51	Course In Basic Physiology	12	1	3 hours	180	60	
PHPH22	Course In Practical Physiology	6					120
E	Two Elective courses*	2+2	1+1	1 hour+ 1 hour	40+40		
Total		30 credit points			600 marks**		

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

Two elective courses each one has 2 CP. The students should select two elective which has not been selected before in 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)

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



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5.2- Level/Year of Program: Second part of MD program (100 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			
PHPH53	Scieintific and theaoritcal Course in Physiology	60	2	3 hours For each paper	360 for each paper	180	360	540
	Practical training in Physiology	30						
	***Scientific activities	10 (not included in the total marks)						
Total		100 credit points			1800**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 stuff 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

- The program accepts candidates with Masters in Medical Physiology with a grade of GOOD at least.
- 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	420
• Oral exam	60
• Practical exam	120
• Total	600
Second part (100 credit points including 10 credit points not included in the total marks =1800 mark)	
• Written exam	720
• Oral exam	180
• Practical exam	360
• Portfolio	540
Total	1800

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 MD 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**



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- Passing level 60% of total marks of the exam and at least 50% passing level of the total written exam marks
- **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 MD 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. Magda Ibrahim Mohamed

Date: January 2018