

Template No (13)
Program Specification
(Year: 2012/2013)

University/Academy: Suez Canal University
Faculty/Institute: Science
Department: Zoology

A- Basic information

1- Program Title: **Diploma of physiology and biochemistry**

2- Program Type : (single) (double) (Multi)

Corresponding Department: Zoology Department

Date of approving the program: 18 /9/2012

B- Professional Information

1) General Aims of the Program:

The aim of this program is to provide the postgraduate with advanced medical knowledge of essentials about the normal and abnormal function of the human body, with particular emphasis on medical (diseases of the body) and applied aspects such as endocrinology, homeostasis, exercise physiology, and parasitology. The programme covers a wide range of biomedical areas, including human physiology, biochemistry and microbiology.

The program help the student to:

1. Evaluate the scientific research and its applications in various Physiology & biochemistry fields.
2. Acquire professional and practical skills for enhancing his/her capabilities and career.
3. Perform scientific Master research that is qualified for local and/or international publication.

2) Program Intended Learning Outcomes (ILOs)

On completion of a major sequence in physiology students would be able to:

a. knowledge and Understanding Skills

A1- Trace the basics and fundamentals and developments related to applied Physiology & biochemistry , as well as the related fields.

A2- Demonstrate the influence of professional practices of Physiology & biochemistry studies on the community and the environment.

A3- Follow the basics and ethics of scientific research and professional practices.

A4- Appreciate the principles and basics of quality control and its application in applied Physiology & biochemistry field.

b. Intellectual Skills

B1- Evaluate microbiology information - with the unavailability of some data - for solving problems related to Physiology & biochemistry applications

B2- Integrate information from a variety of scientific fields for problem solving.

B3- Perform proper scientific studies/reports in microbial applications, considering the basics and ethics of scientific writing.

B4- Distinguish the improvement of performance through planning, risk assessment and decision making in the practices of applied Physiology & biochemistry .

c. Professional and Practical Skills

c1- Apply the recent techniques and instrumentation of microbial isolation and handling efficiently for solving Physiology & biochemistry problems.

C2- Execute professional reports related to different applications of microorganisms in a responsible, safe and ethical manner for preparation of his/her research articles.

C3- Achieve experiments in applied microbiology that achieves standard quality results using existing tools and methods.

d. General skills

D1- Apply CIT, tools and scientific resources effectively in different tasks related to applied microbiology.

D2- Participate in a work team effectively according to the established rules, indicators and ethics;; considering time management, self and others evaluation and self continuing learning.

5-The skeleton and constituents of the program:

A- Program period: 1 year

B- Program Skeleton:

No of hours/ no of units:

Theoretical: 16 Practical: 16 Total: 32

Obligatory: 8 Transitional: Optional:

Basic science courses: No. 100 %

Human and social courses: No. %

The specialization course: No. %

Other courses (computer,.....): No. %

Field training:

C- Program Levels

Level 1: the students should acquire **32** units distributed as follow:

Obligatory: 8 Transitional: Selection: 24

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D- Program courses

D-1. Obligatory:

Course Title
Biochemistry (1)
Physiology
Endocrinology
Experimental physiology
Biochemistry (2)
Immunology
Hematology
Bacteriology and parasitology

Code	Course	No. of Units	No of hours weekly		Level	Term
			Practical	Theoretical		
	Biochemistry (1)	4		2		1 or 2
	Physiology	4		2		1 or 2
	Endocrinology	4		2		1 or 2
	Experimental physiology	4	2			1 or 2
	Biochemistry (2)	4		2		1 or 2
	Immunology	4		2		1 or 2
	Hematology	4		2		1 or 2
	Bacteriology and parasitology	4	2			1 or 2

6- Courses content

Course Code:

Course name: Biochemistry 1

Contents: The course provide the principle of oxidative stress and cell injury. The mechanism used by human body to compensate the oxidative stress

Course Code:

Course name: Endocrinology

Contents:

- 1- Identifying the significant anatomical structures of the human endocrine system
- 2- Enhancing the ability of the students for self learning by searching on new techniques and applications in field of physiology

Course Code:**Course name: Hematology****Contents:**

- Providing the basic concepts and terminology of hematology.
- To become familiar with the Platelets, Coagulation factors, Blood diseases, Hemoglobin and Defensive mechanism
- To develop the ability of student to communicate complex biological ideas effectively

Course Code:**Course name: immunology****Contents:**

- provide integrated programmes of study in the modern biological sciences from component of immune system to the chain of immune reaction against infection
- equip students with the knowledge and skills needed for an understanding of basic immunology
- equip students with a range of personal transferable skills which would enable them to pursue a professional career within biology or elsewhere.

Course Code:**Course name: physiology****Contents:**

- provide integrated programmes of study in the modern biological sciences from component of different systems
- equip students with the knowledge and skills needed for an understanding of basic physiology

Course Code:**Course name: Practical 2 (Parasitology)****Contents:**

- 1-Demonstrate detailed knowledge and understanding of the application and evaluation of advanced diagnostic techniques
- 2-Demonstrate increased ability to diagnose parasites by microscopy

Course Code:**Course name: experimental physiology**

Contents:

Our overall aim is to help the student acquire a thorough knowledge and appreciation of the function and control of normal organs that will serve as a basis for understanding of clinical medicine.

7- Requirements to enter this program: (according to the Regulations)

- أ - أن يكون مستوفيا لشروط القبول التي يحددها المجلس الاعلى للجامعات
ب- أن يكون حاصلا على شهادة البكالوريوس تخصص علم الحيوان
ج- أن يكون متفرغا على الاقل يومان للدراسة بالكلية

8- The organization rules for completion the program:

- 1- To progress in physiology program, the student should pass successfully all the compulsory and optional courses and the thesis as well, according to the study curricula approved in ١٩٩٣
- 2- The student should have a minimum of 60% of the total marks (Written+ Lab exercise) to pass successfully in each course in the program.
- 3- Grade levels are given to the student according to the following, mark ranges:
60-64% D; / 65%-74% C; / 75%-84% B; / 85%-100% A.

The student should pass successfully 32hrs

9- Methods and rules of student assessments:

Method	What measured from the ILOs
1- Practical exams	
2- Written exam	

10- Program assessment methods:

Evaluator	Method	Sample
1- The graduates	Questionnaire	Post graduate students
2- External evaluator	Report	Other universities
3- Other methods		

Course content	A knowledge and Understanding Skills				Intellectual Skills				Professional and Practical Skills				General skills			
	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
Biochemistry (1)	x	x	x	x	x	x	x	x	x	x	x		x	x		
Physiology	x	x	x	x	x	x	x	x	x	x	x		x	x		
Endocrinology	x	x	x	x	x	x	x	x	x	x	x		x	x		
Experimental Physiology (1)									x	x	x					
Biochemistry (2)	x	x	x	x	x	x	x	x	x	x	x		x	x		
Immunology	x	x	x	x	x	x	x	x	x	x	x		x	x		
Hematology	x	x	x	x	x	x	x	x	x	x	x		x	x		
Experimental Physiology(2) (Bacteriology and Parasitology)									x	x	x					

program coordinator:
Dr. Mohamed Salah

Head of Department:
Prof. MAHA Soliman

