

## Course Specification

### Physiology I

#### 1. General Information:

<b>Course Title</b>	<b>Physiology I</b>
<b>Code No.</b>	<b>PH712</b>
<b>Department</b>	<b>Physiology</b>
<b>Teaching Hours</b>	<b>250 hours</b>
<b>Language</b>	<b>English</b>
<b>Academic Year</b>	<b>First Year</b>
<b>Course Coordinator</b>	<b>Dr. Ebtisam Omar Alsanosi</b>
<b>Date and Signature</b>	<b>September 2020</b>

#### 1.1 . Number of hours per week:

Lectures: 6hrs.

Laboratory: 2hrs.

Tutorial:2hrs.

Total: 10hrs.

#### 2. Objectives of Course:

- Providing students with an understanding of the function and regulation of the human body and physiological integration of the organ systems to maintain homeostasis.
- To demonstrate how the physiology science integrates with the other medical sciences such as biochemistry, anatomy, histology and how it correlates with clinical applications .
- To study in depth the functions of the autonomic, the neuromuscular, the respiratory and the cardiovascular systems as well as their integration to achieve homeostasis.

### 3. Intending Learning Outcomes (ILOs):

#### a. Knowledge and Understanding:

On successful completion of the course, student will be able to:

a.1	Define the functions of organelles and molecules of the cell.
a.2	Describe the functions of the nerve cell and the muscle fiber grossly and at the molecular level.
a.3	State the functions of the autonomic nervous system and different components of blood as well as the respiratory and cardiovascular systems both grossly and at the molecular level.
a.4	Recognize certain biophysical laws and their relation to physiology .

#### b. Intellectual skills:

On successful completion of the course, student will be able to:

b.1	Distinguish between physiological and pathological conditions by interpreting the most important physiological laboratory results as for blood, respiratory, neuromuscular ..etc.
b.2	Analyze some important clinical parameters for instance, arterial blood pressure(ABP), electrocardiogram (ECG), nerve conduction velocity and pulmonary functions in normal body state.
b.3	Correlate physiological findings with other basic and clinical branches.

#### c. Practical and professional skills:

On successful completion of the course, student will be able to:

c.1	Carry out some important hematological tests such as estimation of blood Hb, blood group, bleeding and clotting times and determination of the hematocrite value and perform some neurological tests.
c.2	Perform an essential respiratory function tests.
c.3	Measure the arterial blood pressure.
c.4	Use a stethoscope for examining heart and respiratory sounds.

#### d. General and Transferable skills:

On successful completion of the course, student will be able to:

d.1	Obtain good communicate skills: orally and by writing
d.2	Apply IT skills to present a scientific work.
d.3	Present clearly and effectively a scientific topic in a tutorial, a scientific meeting

#### 4. Course Contents:

Academic Subject	Total Hours (250)	Lectures	Laboratory	Tutorials
Introduction: Cell Physiology	15	10	--	5
Physiology of Blood	54	30	14	10
Cardiovascular System	45	30	10	5
Autonomic Nervous System	32	20	2	10
Respiratory System	54	30	14	10
Muscles and Nerves	50	30	10	10

#### 5. Teaching and Learning Methods :

- Lectures
- Practical Sessions
- Tutorials
- Student Group Presentation

#### 6. Evaluation Methods

Evaluation Method	Date	Marks 250	%	ILOs Assessed
1	<b>Annual Work</b>	<b>50</b>	<b>20%</b>	
	▪ Mid-year Exam	40		Knowledge, understanding and intellectual skills
	▪ Other quizzes	10		Knowledge, understanding and intellectual skills
2	<b>Final Exam</b>	<b>200</b>	<b>80%</b>	
	▪ Written	125		Knowledge, understanding and intellectual skills
	▪ Practical	50		knowledge, understanding and intellectual skills Practical and professional skills General and transferable skills
	▪ Oral	25		Knowledge, understanding and intellectual skills Professional, general and transferable skills

## 7. Evaluation Schedule:

Evaluation		Date
1	<b>Mid-Year exam:</b> Written exam includes different types of questions MCQs, True & False, short essay questions, matching and complete the blanks	January
2	<b>Final written exam:</b> consists of different types of questions MCQs, True & False, short essay questions, matching and complete the blanks	June
3	<b>Practical exam:</b> Perform tests related to subjects, spot diagnosis	
4	<b>Oral exam:</b> mainly conducted by external visitors	
5	<b>Other quizzes</b>	Before mid-year exam

## 8. References :

Reference Title	Publisher	Edition	Author	Place
Course handouts	==	==	Department staff	Library
<b>Essential Books</b>	Guyton on textbook of Human Physiology and Mechanisms of Disease	Philadelphia : Saunders	Arthur C. Guyton; John E Hall	==
<b>Recommended Books:</b>	Review of Medical Physiology	McGraw-Hill Medical	22 <sup>nd</sup> edition 2005	William F. Ganong ==

## 9. Required Facilities:

Required Facilities	Comments
Lecture Theatre	Provided by the Faculty (1 theater and 1 large hall).
Small group classes	in the Department (60 students).
Laboratory	laboratory facilities to perform the required experiments are available in the department.
Video zoom camera	Used in distance learning

Course Coordinator: Ebtisam Omar Alsanosi

Signature: .....

Programme Coordinator: Dr. Hussain Amaigil

Signature:.....

Head of Department: Ebtisam Omar Alsanosi

Signature:.....

Date: September 2020

Course ILOs Mapping Matrix – Physiology I

Topic	Knowledge and Understanding a				Intellectual Skills b			Practical and Professional Skills c				General and Transferable Skills d		
	a.1	a.2	a.3	a.4	b.1	b.2	b.3	c.1	c.2	c.3	c.4	d.1	d.2	d.3
Introduction: Cell Physiology	x											x	x	x
Physiology of Blood	x		x	x	x		x	x				x	x	x
Cardiovascular System			x	x	x	x	x			x	x	x	x	x
Autonomic Nervous System	x	x	x		x	x	x	x				x	x	x
Respiratory System			x	x	x		x		x		x	x	x	x
Muscles and Nerves	x	x			x	x		x				x	x	x