



MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC
RESEARCH

PAITAKHT TECHNICAL INSTITUTE
DEPARTMENT OF PATHOLOGICAL ANALYSIS

Course book
HUMAN PHYSIOLOGY
(Theory + Practice)

First stage: Second course

Academic Year 2023 – 2024

Course Book

1. Course name	Human Physiology (Practic+ Theory)
2. Lecturer in charge	
3. Department/ Institute	Pathological Analysis dep./Paitakht Technical Institute
4. Contact	
5. Time (in hours) per week	Total () hours weekly
6. Office hours	2 Hours per week
7. Course Language	English
8. Course Type	Main
9. Course code	PAd011
10. Teacher's academic profile:	

10- Course Overview:

The course is designed to assist student to acquire comprehensive knowledge of the normal functions of the organ systems of the human body to facilitate understanding of physiological basis of health, identify alteration in functions and provide the student with the necessary physiological knowledge to practice nursing.

11- Course Objective:

1. Develop understanding of the normal functioning of various organ systems of the body
2. Identify the relative contribution of each organ system towards maintenance of homeostasis
3. Describe the effect of alterations in functions
4. Apply knowledge of physiological basis to analyze clinical situations and therapeutic applications

12- Student's obligation

- 1-The student attention in all theoretical and practical lectures in academic year.
- 2-Completion of all tests.
- 3-Attendance in exams.
- 4-Write or prepare reports.

13- Forms of Teaching

Our lecture is depending directly on showing the strong point in the lecture via data show depending on the power point program and explain some figures on the white board with the students.

It is important that all students maintain active communication channels throughout the year. The primary communication channels to students in this course are as follows:

Google-classroom : Students should regularly login to the Google-classroom website for important course-related announcements. Teaching materials and course documentation will also be posted on this site.

14- Assessment scheme

Final exam: 50 marks

**Midterm-exams: 20marks for Practical and 20 marks for theoretical
And 10 marks for activity**

15- Student Learning Outcome:

1. To provide Basic Knowledge of functions of the different organs & system in the human body.
2. The content of the subject provides the basic knowledge of different physiological parameters
3. To apply the knowledge of human Physiology in Medical lab. and as well as biomedical engineering field

16- Course Reading list and References:

- Hole's Human Anatomy & Physiology text book 15th Edition
- Ross & Wilson, (2014), Anatomy & Physiology in health & illness, 11th edition, Elsevier Publications
- Medical Physiology, Guyton & Hall, Elsevier

17- The Topics

Theory

<u>Week</u>	<u>Hour</u>	<u>Topic</u>
1	2	Introduction to Human physiology
2	2	Homeostasis
3	2	Cell membrane Physiology and transport across membrane
4	2	Physiology of Nervous System -CNS
5	2	Cardiac physiologies
6	2	Cardiac Action potential
7	2	Midterm exam
8	2	Cardiac cycles and Blood pressure
9	2	Respiratory physiologies
10	2	Physiology of Urinary system
11	2	physiologies of digestive system
12	2	Lymphatic system
13	2	physiologies of Reproductive system
2		Final exam

Practical

<u>Week</u>	<u>Hour</u>	<u>Topic</u>
1	2	Osmosis ,Diffusion & Tonicity
2	2	Vision
3	2	Blood pressure
4	2	Frog pith and preparation
5	2	Taste sensory
6	2	Heart sounds
7	2	Thermometer , measurement of body temperature
8	2	Electrocardiograph
9	2	Stethoscope , how to use?

10	2	microscope
11	2	urine ,urine components ,urine examination
12	2	Blood grouping
13	2	Blood clotting
14	2	Measurement of E.S.R.
15	2	P.C.V , using centrifuge
16	2	Hemoglobin measurement
17	2	Blood smear preparation and staining
18	2	Red blood cell counting , normal values
19	2	white blood cell counting , normal values
2		Final exam

18- Examinations:

Question Styles

Q1/ Answer five only of the following: 1- Write 2 part of urination process 2- Write 2 types of neuron

3- Write 2 functions of endocrine system

Q2/ Put True to correct statement and False to incorrect statement 1- Osmosis is a special kind of diffusion

2- Myocardium is the middle and thickest layer of heart

3- Thymus is responsible for the production of sperm cells 4- Platelet known as thrombocytes

Q3/ Chose the appropriate choice to complete the statement:

1) are oval or rod shaped organelles in the cytoplasm of the cells and called “power stations”.

a. (Golgi apparatus, Lysosomes, Mitochondria, Nucleus)

2) mean formation of red blood cells (RBC).

a. (Thrombopoiesis, Erythropoiesis, Leukopoiesis)

Q4/ Fill the blank with appropriate words

1) In the central nervous system_____matter appear grey, which consists of the nerve cells.

2) _____is the production of all blood cells

3) _____is a tissue fluid (interstitial fluid) that enters the lymphatic vessels.

4) _____blood pressure is pressure obtained at the peak of left ventricular contraction.