

Human Physiology Course Catalogue

2023-2024

College	Erbil Health Technical	
Department	Medical Laboratory Technology	
Module Name	Human Physiology	
Module Code	Higher Diploma	
Semester	2	
ECTS	6	
Module type	Core	
Weekly hours	2	
Weekly hours (Theory)	(2)hr Class	()hr Workload
Weekly hours (Practical)		()hr Workload
Lecturer (Theory)	Assist. Prof. Dr. Zhwan Mohammed Ismail	
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Lecturer (Practical)		
Email		

Course Book

- Course overview:

Introductory course in human anatomy and physiology ,including the study of structure and function of cells ,tissue and the integumentary, muscular and nervous systems .introduce common human disease processes .Laboratory component includes anatomical studies using microscopy and dissection and the study of physiological studies using microscopy and dissection and the study of physiological concepts via experimentation.

- Course objective:

The objective of this course is to offer an in-depth presentation of the function of the major organs and organ system of the human body. the course is designed to expand physiological concept present in prerequisite courses .It is expected that the student understand the unique role of each organ and organ system in maintain health students should be able to describe the function of the distinctive cells that comprise each major organ and when appropriate define the role of physiological functional unit .case studies will be provided to enhance the integration of material presented in class.

- Student's obligation

We have theory 2 hours ,practical 3 hours

General advice:

1. **keep up with material.**it is essential that you study the material within a reasonable period of time after lecture/lab .
2. **2-Ask question.** regardless of whether you are in lecture or lab, it is essential that you ask question if you don't understand a concept.
3. **3-Read the book** .Make sure you read the appropriate chapter (s) before my lecture on a given topic .the description, tables, figure and diagram of concepts in the book will be most helpful in helping you learn the material.

You have got 3 hours for lab.....use your time wisely. Although not every lab session will go with full 3 hours .it is wise use the remaining time to do brush up on material that was covered during previous labs. Lab exams will cover a lot of material, so it is important that you fully utilize lab time whenever available to you.

- Forms of teaching

Lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters.

My philosophy is to provide you with a comfortable learning environment where you can not only listen, but speak. I want to be an enthusiastic teacher, share my love for science and inspire you to do your best in this course. I am open to hearing your concerns and needs and will respect your ideas.

- Assessment scheme

40% Assignments

4% Quiz

16% Midterm Exam

15% Final Theoretical Exam

25% Final Practical Exam

- **Specific learning outcome for theory:**

Upon completion of this course, the student will be able to:

1. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system, and describe locations of major organs of each system
2. Explain the homeostatic mechanisms, controls, and specific functions of the systems of the human body.
3. Design, construct, and quantify experimental methods to evaluate human physiological systems.
4. Analyze and explain medical and health science-related scenarios of physiological system disruptions.
5. Identify causes and effects of homeostatic imbalances.
6. Evaluate information concerning selected topics within the theme of human physiology.

Learning Outcomes for Lab

Upon successful completion of this course, students will:

1. Apply appropriate safety and ethical standards.
2. Locate and identify anatomical structures.
3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
4. Work collaboratively to perform experiments.
5. Demonstrate the steps involved in the scientific method.
6. Communicate results of scientific investigations, analyze data and formulate conclusions.
7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations, and predictions.

- **Course Reading List and References:**

1. Textbook of Medical Physiology, by: A C Guyton and J E Hall.
2. Tortora & Derrickson- Principles of Anatomy and Physiology.
3. Review of Medical Physiology, by: W F Ganong.

- Course topics (Theory)	Week	Learning Outcome
1 st lec. Introduction of this course. introduction about anatomy and physiology	1	1

2 nd lec. Homeostasis- Body Fluid	2	1 & 5
3 rd lec. Structure and function of plasma membrane.	3	1 & 2
4 rd lec. Cellular transport mechanisms. Passive and Active transport	4	2
5 th lec. Physiology of the Nervous system Part I	5	2 & 3
6 th lec. Physiology of the Nervous system Part II	6	3 & 4
7 th lec. Skeletal muscle structure and physiology.	7	1, 2
8 th lec. Cardiac muscle structure and physiology.	8	1, 2 & 5
9 th lec. 15 th Respiratory system anatomy and physiology	9	1 & 5
10 th lec. Renal system anatomy and physiology	10	1 & 5
11 th lec. Especial sense- Physiology of Vision	11	2 & 6
12 th lec. Especial sense- Physiology of Hearing	12	2 & 6
- Practical Topics	Week	Learning Outcome
1 st lab . Introduction about the objective of practical physiology	1	1
2 nd lab.. Homeostasis	2	1&2
3 rd lab. Injection technics	3	2,3&4
4 th lab. . Osmotic fragility	4	1&2
5 th lab Frog pithing and preparation	5	4&5
6 th lab. Skeletal muscle contraction of frog	6	2&5
7 th lab. CPR	7	4&7
8 th lab. BP measurement	8	2&3
9 th lab. Exercise and BP.	9	1,2&3
10 th lab. ECG	10	2,3,4,&6

