Course Specification
Student Version

Course Title:	Human Body 1
Course Code:	HBO 203
Department:	Basic Medical Sciences
Program:	Bachelor of Medicine and Surgery
College:	Vision College in Riyadh
Institution:	Vision College in Riyadh
Revised:	July 2025

A. Course Identification

1. Credit hours: 6 (4+1+1)
2. Level/year at which this course is offered: Level 3/Year 2
3. Pre-requisites for this course (if any): BIOL 101, PHYS 101, CHEM 101, ENGL 105
4. Co-requisites for this course (if any): NONE

B. Teaching Methods

1	Lectures
2	Practical sessions
3	PBLs

C. Course Description and Main objective

In this course, students will learn the gross & microscopic anatomy and physiology of the human body. The histological focus will be on the fundamentals of the basic microscopic structures of different tissues & organs. The changes in the histological structures due to exposure to injurious stimuli will be also highlighted through a brief pathological point of view. The physiological focus will be on the correlation between the macro and microstructure with its physiological functions. The integration between the three disciplines regarding the human body is important for the students' progress through future modules.

This course encompasses the structural macroscopic and microscopic organization of the human body and an appreciation for how this structural organization relates to human physiology. It is designed to ease clinical applications with basic science concepts in the future. This course takes a systemic rather than regional approach to anatomy, histology, and physiology.

2. Coursen Objectives

By the end of this course, the students will be able to:-

1. Describe body cells, tissues, various methods of staining and microscopy
2. Outline the cell structure & cellular homeostasis and disturbance in this homeostasis in response to various stimuli
3. Give examples of the membranous & non-membranous organelles
4. Distinguish between cellular organelles regarding the structure & function by focusing on the mitochondrial function of electron transport.
5. Describe the nervous system regarding the anatomical divisions, nervous tissue microstructure, and functions of the somatic & autonomic nervous system
6. Outline the anatomical divisions of different body systems
7. Identify the microscopic structure of major organs of different body systems

8. Describe the microstructure of the 2 layers of skin
9. List skin appendages with reference to the histology of the breast as one of the skin appendages.
10. Outline the general microstructure of the vascular wall
11. Differentiate various types of blood vessels by applying the general structure of the vascular wall
12. Define acid-base homeostasis considering the role of the buffer system in the correction of the Ph.
13. Enlist the normal range values of different body electrolytes such as Na, K, and HCO3….
14. Define metabolism & basal metabolic rate
15. Describe the changes that occur in different stages of the cell cycle
16. Enlist the 3 types of muscles
17. Demonstrate the structure of each muscle type & its location.
18. Describe the cell membrane ultrastructure, transport, and membrane potential
19. Define cell polarity focusing on the apical, basal, and lateral specializations of the cell
20. Enlist the 4 main basic tissues of the human body
21. Describe various types of epithelial tissue
22. Describe various types of connective tissue
23. Compare between cartilage and bone regarding cell & fiber types and consistency of the matrix
24. Describe the steps of each type of bone ossification
25. Describe various types of blood elements
26. Interpret blood film concerning its deviation from normal
27. Describe the structure of the red and yellow bone marrow
28. Classify the distribution of the total body water in different fluid compartments
29. Enlist the various mechanisms controlling the volume of different fluid compartments in the body
30. Participate actively with friends during group work sessions
31. Demonstrate the microstructure of different organs by drawing diagrams
32. Identify cellular organelles in electron micrographs
33. Identify different histological slides by light microscope during practical sessions
34. Identify the gross features of different body organs of the human body

35. Use the fine and coarse adjustment of the microscope during microscopic examination of histological slides

D. Course Content

No.	List of Topics
1	Preparation of tissues for microscopic examination and introduction to the course
2	Cell structure and function of the different muscle cells & blood cells with reference to their morphological changes in response to stimuli.
3	Cell membrane transports, membrane action potential, nerve & muscle membrane potential, physiology of neuromuscular junctions
4	Epithelial tissue and cell polarity
5	Connective tissue proper & specialized connective tissue
6	Metabolism, body fluid and homeostasis
7	Outlines of the gross & microscopic structure of major organs of different body systems
8	Description of the nervous system regarding the anatomical divisions, nervous tissue microstructure and functions of the somatic & autonomic nervous system
9	Outlines of the gross & microscopic structure of the special organs (eye and ear)

E. Assessment tools

#	Assessment task	Percentage of Total Assessment Score
1	PBLs evaluation	10%
2	Quiz	10%
3	Midterm Exam	20%
4	Final Written Exam	40%
5	Final OSPE	20%
	Total	

F. Learning Resources

Required Textbooks	• Janquiere's Basic Histology: Text and atlas, 13th Edition, 2013. • Linda S. Costanzo: Textbook of physiology, 6th edition, 2014 • Clinical Anatomy for medical students by Snell R, 7th Edition.
Essential Reference Material	-

Electronic Material	• http://histology.medicine.umich.edu/ • https://www.biolucida.net/viewer/