



## Course Descriptor APSC310- Human Anatomy and Physiology

<b>Proposed Academic Year</b>	2021-22	<b>Last Reviewed Academic Year</b>	2019-2020
<b>Course Code</b>	APSC310	<b>Course Title</b>	Human Anatomy and Physiology
<b>Credit hours</b>	3	<b>Level of study</b>	Undergraduate
<b>College / Centre</b>	CAHS	<b>Department</b>	
<b>Co-requisites</b>	APSC381	<b>Pre-requisites</b>	BIOL101

### 1. COURSE OUTLINE

[The course is designed to provide the students applied scientific disciplines with knowledge about the normal function and mechanism of various physiological and systems basis on the anatomical and histological correlation, including: cells physiology and body fluid, membranes physiology, nerves and muscles, contractions of skeletal muscles, excitation contraction coupling, Neuromuscular transmission, Autonomic nervous system, Sensory nervous system, Cardiovascular system, Digestive system, Respiratory system, Reproductive system, and finally Endocrine system.

### 2. AIMS

The aim of this module is to familiarize the student with the anatomical structure and physiological function of normal tissues in the body. The modules will introduce students to: the function of various body systems, the normal secretion of the cells such as hormones, enzymes and chemotactic substances, the body fluid & hemodynamic, the body thermal regulation, and the nerve impulses.

### 3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

<b>Learning Outcomes (Definitive)</b>	<b>Teaching and Learning methods (Indicative)</b>	<b>Assessment (Indicative)</b>
Upon successful completion of this course, students will be able to:		
1. Identify the anatomical and histological structure of selected body tissue/ organ. Also, identifying types body organs such as internal organs, bones, joints, muscles, nerves, arteries and veins.	Lectures, lab work and presentations	in-class tests, quizzes
2. Relate the function of the tissue to its structure o the students can understand the concentrations of electrolytes in body fluid and the way of hemodynamic.	Lectures, lab work and presentations	Quiz and written examination



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3. Recognize the importance of keeping normal physiological activities of various body tissues.	Lectures, lab work and presentations	in-class tests, quizzes
4. Evaluate the physiological concepts and Interpret the effect of hormones on the body tissues	Lectures, lab work and presentations	in-class tests, quizzes
5. Relate the concepts of anatomy & physiology to the advancement of technology. Also, Identify the link between physiology and other sciences such as biology	Lectures, lab work and presentations	Quiz and written examination

### 4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Quizzes	20%
Mid-term Exam	20%
Assignments	20%
Final Examination	40%
<b>TOTAL</b>	<b>100%</b>

### 5. ACHIEVING A PASS

Students will achieve **03** credit hours for this course by passing **ALL** of the course assessments [*alternatively, list the compulsory pass assessments\**] and achieving a **minimum overall score of 50%**

**NB \*Ensure that ALL learning outcomes are taken into account**

### 6. COURSE CONTENT (Indicative)

Introduction to the course. The human body: An Orientation. An Overview of Anatomy & Physiology. Histology of Tissues.

The Skelto- muscular system: Axial bones, appendicular bones, joints, Skelton muscles, smooth muscles, tendons, ligaments and fascia.

Blood: Composition, functions, blood cells, blood plasma. The Cardiovascular system: Heart anatomy and function, Blood Vessels structure and function, Physiology of circulation.

The lymphatic system: lymphatic vessels, lymph nodes, spleen, thymus, tonsils, Immune system & Immunity.

The lymphatic system: continued..



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The Urinary system: Kidney anatomy and physiology. Mechanisms of urine formation. Anatomy of Ureters, Urinary bladder & Urethra. Urine: physical characteristics & chemical composition. Fluid, Electrolytes & Acid-Base Balance. Hemodynamics.

The Respiratory system: Functional anatomy and physiology. Mechanics of breathing & control of respiration. Gas exchange between the blood, lungs and tissues.

The Digestive system: Functional anatomy and physiology.

Basic functional concepts. Physiology of digestion and absorption.

The Nervous system: Functional anatomy and physiology. Neurophysiology & reflex activity.

The special senses: Eye & vision, Ear hearing and balance, Taste and smell.

The skin: anatomy & physiology. The mammary glands physiology.

The Endocrine system: Major endocrine organs & hormone secretion.

The Reproductive system anatomy and physiology.

The Vitamins

<b>TOTAL HOURS</b>	<b>45</b>
Plus <b>RECOMMENDED INDEPENDENT STUDY HOURS</b>	<b>15</b>
<b>TOTAL COURSE HOURS</b>	<b>60</b>

### 7. RECOMMENDED REFERENCES

#### Core text/s:

Gerard J. Tortora & Bryan H. Derrickson (2015). Principles of Anatomy & Physiology, Volume 1 & 2, 13th eds. John Wiley & Sons.

#### Recommended Reading:

1. Kapit, W. & Elson, L. (2002). The Anatomy Coloring book, 3rd edition, Benjamin Cummings.
2. Young, B. & Heath J. W. (2006). Wheater's Functional Histology: A Text and Color Atlas. 5th Edition, Churchill Livingstone, London

#### Library + online resources:

#### Open Educational Resources:



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