

Course Unit	Anatomohistophysiology I	Field of study	Health Sciences
Bachelor in	Physiotherapy	School	School of Health
Academic Year	2023/2024	Year of study	1
Type	Semestral	Semester	1
Workload (hours)	162	Contact hours	T 30 TP - PL 30 TC - S - E - OT 20 O -
Level	1-1	ECTS credits	6.0
Code	9504-770-1102-00-23		

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Andreia Martins Pereira

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Describes the body's levels of structural and functional organization at the chemical, cellular, tissue and anatomical level
2. Identifies; describes the skeleton's bones and main anatomical features; relates structure and functions of the skeletal system, knows the principles of joint classification, describes the main joints
3. Identifies and locates the macroscopic structures of the muscular system, relating to the movements of body segments; describes structures and mechanisms of skeletal muscle contraction
4. Describes the constitution and distribution of the cardiovascular system and understands the principles governing its function.
5. To describe anatomical components of respiratory system and physiological aspects of pulmonary ventilation.
6. Describes the integumentary system's functions and relates the structure and function of its main components

Prerequisites

Before the course unit the learner is expected to be able to:
none

Course contents

1. The organization of the human body -the structural and functional organization of the human body; chemical physiology; cytology; histology. 2. Support and movement: Skeletal system - gross anatomy, histology and development; Articulations and biomechanics of body movement; Muscular system - histology and physiology, gross anatomy; Integumentary system. 3. Constitution, distribution and function of the cardiovascular system 4. Anatomical components of respiratory system and physiological aspects.

Course contents (extended version)

1. INTRODUCTION TO ANATOMY STUDY
 - Topographical regions
 - Anatomical position. Plans. Concepts: cranial/caudal, dorsal/ventral, medial/lateral.
2. OSTEOARTICULAR AND INTEGUMENTARY SYSTEM
 - Skeletal tissues
 - Vertebral column: vertebrae, sacrum, coccyx.
 - Skeleton of thorax: thoracic vertebrae, sternum and ribs.
 - Skull.
 - Upper limb: scapula, clavicle, humerus, radius, ulna, carpal bones, metacarpal bones, phalanges.
 - Lower limb: innominate bone, femur, tibia, fibula, patella, tarsal and metatarsal bones, phalanges.
 - Concept of joint. Synovial joints. The movement.
3. MUSCULAR SYSTEM
 - Muscle cell and physiology of muscle contraction
 - Anatomy of skeletal muscles.
 - Proximal and distal origin and function.
 - Anatomy and physiology of the integumentary system
 - Microscopic organization of the skin
5. NERVOUS SYSTEM
 - Physiology, membrane potentials;
 - Central Nervous System; S.
 - Peripheral Nervous
 - Autonomic Nervous System; the senses; functional integration

Recommended reading

1. Drake RL, Vogl AW, & AWM, Mitchell (Eds.). (2010). Gray's Anatomia para Estudantes (2ª ed.): Rio de Janeiro: Editora Elsevier.
2. Netter FH (Ed.). (1987). Anatomia y Fisiología. Colección CIBA de Ilustraciones Médicas. : Barcelona: Salvat Editores.
3. Berne, R. M. , & Levy, M. N. (Eds.). (2004). Fisiología. (5ª ed.): Rio de Janeiro: Mosby.
4. Hoffbrand, A. V. , Petit, J. E. , & Moss, P. A. H. (Eds.). (2004). Fundamentos de Hematología. (4ª ed.): Porto Alegre: ARTMED.
5. Ovalle, W. K. , & Nahimney, P. C. (2008). Netter Bases da Histologia. São Paulo Brasil: Elsevier Editor, Ltda.

Teaching and learning methods

Teaching methodology: Theoretical classes and practical laboratory classes (anatomy and physiology), that occur in specific rooms equipped with anatomic models and informatics media.

Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
 - Intermediate Written Test - 45%
 - Intermediate Written Test - 45%
 - Practical Work - 10%
2. Alternative 3 - (Regular, Student Worker) (Supplementary)
 - Final Written Exam - 100%
3. Alternative 4 - (Regular, Student Worker) (Special)
 - Final Written Exam - 100%

Language of instruction

Portuguese

Electronic validation

Andreia Martins Pereira	Maria Cristina Martins Teixeira	Ana Maria Nunes Português Galvão	Adília Maria Pires da Silva Fernandes
12-12-2023	29-12-2023	01-01-2024	10-01-2024