



HUMAN ANATOMY	
Enrollment year	2020/2021
Academic year	2020/2021
Regulations	DM270
Academic discipline	BIO/16 ()
Department	DEPARTMENT OF PUBLIC HEALTH, NEUROSCIENCE, EXPERIMENTAL AND FORENSIC MEDICINE
Course	NURSING
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	(01/10/2020 - 30/06/2021)
ECTS	4
Lesson hours	60 lesson hours
Language	Italian
Activity type	WRITTEN TEST
Teacher	MICHELETTI PIERO (titolare) - 4 ECTS
Prerequisites	Basic knowledge in the biological field
Learning outcomes	<p>The course aims to provide the student with the cognitive and methodological tools necessary for:</p> <p>Understanding the overall morphology of the various anatomical structures;</p> <p>Understanding the macroscopic and microscopic structure of the individual devices;</p> <p>Understanding how the various devices work;</p> <p>Correlate the equipment in a general functional scheme;</p> <p>Apply the acquired knowledge to understand the main dysfunctions following congenital or acquired alterations of the organ anatomy, through clinical anatomy references.</p> <p>At the end of the course the student will have to:</p>

To know the organization of human anatomy;  
To know the morphology and the seat of the organs of the different apparatuses;  
Know and relate the organ functions also according to the main diseases.

#### Course contents

##### Locomotor system:

Skeletal architecture of the bones and the main joints. Definition of the mechanical, dynamic and metabolic aspects of the skeletal and muscular system.

Bones of the skull, vertebral column, rib cage, pelvis, bones of the limbs. Articulations of the scapular, coxofemoral and knee girdles. Notions of deltoid muscles, trapezius, respiratory muscles, quadriceps femoris. Implications in clinical practice.

##### Circulatory system:

Description of the circle and morpho-functional representation of arterial and venous systems. Description of regional arterio-venous vascular morphology. Arteries and main veins, of the skull, of the neck and of the limbs. Description of the splenic and hypophyseal portal circles.

Implications in clinical practice.

##### Lymphatic system:

Description of the lymphatic system. Lymph node morpho-functional topography and synthesis of immune function. Axillary and inguinal lymph node stations, lymphoid organs, thymus, spleen, lymphoid tissue associated with mucous membranes (MALT). Implications in clinical practice.

##### Cardiac apparatus:

Morphological representation of the apparatus and its topographic relationships. Microscopic anatomy of cardiac muscle tissue.

Morpho-functional description of cavitory and valve systems in their dynamic and functional relationships. Description of the skeletal system of the heart. Description of the coronary circle. Description of the conduction system. Description of the nervous component in organ function. Implications in clinical practice.

##### Digestive system:

Description of the digestive tract and morphological representation of the apparatus and its topographic relationships. Functional morphology of oral cavity, pharynx, esophagus, stomach, small intestine and large intestine, with reference to microscopic and macroscopic components. Morpho-functional description of the involved muscular component of the mechanisms of swallowing and peristalsis. Description of the hormonal and enzymatic function. Description of the lymphatic component. Morpho-functional representation of the liver and biliary tract and pancreas. Implications in clinical practice.

##### Urinary system:

Description of the renal apparatus and of the excretory ways, morphology and topographic relationships. Morpho-functional description of the kidney of the juxtaglomerular apparatus.

Morpho-functional description of ureters, bladder and urethra and gender morphological differences. Nervous component of the excretory function. Implications in clinical practice.

**Respiratory system:**

Description of the respiratory tree and morphological representation of the apparatus and its topographic relationships. Description of the respiratory mechanics with reference to the musculoskeletal component. Morpho-functional description of nose and nasal cavity, pharynx, larynx, trachea, bronchi and lungs. Morpho-functional description of the exchange barrier. Implications in clinical practice.

**Reproductive system:**

Morpho-functional representation of the apparatus and its topographical relationships of the male and female apparatuses. Morpho-functional description of testis, epididymis, spermatic pathways, prostate and external genitalia. Morpho-functional description of ovaries, appendages, uterus and external genitalia. Menstrual cycle and ovarian cycle. Gender endocrine aspects. Implications in clinical practice.

**Endocrine system:**

Description of the endocrine system. Morpho-functional description of pituitary, epiphysis, thyroid, parathyroids, adrenal glands, endocrine pancreas. Implications in clinical practice.

**Nervous system:**

Description and organization of the nervous system. Definition of structural and functional differences between gray and white matter. Morpho-functional description of cerebral ventricles and differences in localization and constitution of various types of meninges. Morpho-functional encephalic organization: telencephalon, diencephalon, midbrain, bridge, medulla oblongata, cerebellum. Morpho-functional description of the limbic system and of the main nuclei. Key features of the cerebral arterial circulation and venous drainage. Morpho-functional description of the hypothalamic-hypophyseal axis. Morpho-functional description of the blood-brain barrier. Sensitive pathways, pyramidal and extrapyramidal pathways. Overview of the distribution and function of the cranial nerves. Morpho-functional description of the marrow and spinal nerves. Classification of the autonomic nervous system. Morpho-functional description of ganglion chains of sympathetic division and collateral ganglia. Functional implications in the adrenal medulla. Effects of sympathetic stimulation. Organization of the parasympathetic division and functional implications of stimulation. Implications in clinical practice.

**Teaching methods**

Frontal teaching with the aid of animation and simulation supports. Representation and comparison of morphology through diagnostic imaging supports. Cases of Clinical Anatomy and description of pathological frames referable to anatomical involvements.

**Reccomended or required readings**

Anatomia Umana - Martini, Tallitsch, Nath – EdiSES, 7° edizione  
Anatomia Umana - Gerard G. Tortora, Mark T. Nielsen, CEA 2012, 1° edizione

Michael McKinley - Valerie Dean O'Loughlin, Piccin 2014 1° edizione  
Prometheus Atlante di Anatomia EdiSES 2014 2° edizione.

#### Assessment methods

The topics will be held over the two semesters, in the sessions of January and February there will be two partial tests related to the topics previously held.

The test involves 30 questions with 4 answers, each question has only one correct answer. The time available for delivery is 30 minutes. The answer is evaluated according to the following criterion: 1 point for each correct answer; 0 points for each answer not supplied; -0.20 points for each wrong answer. The test is considered passed with an evaluation NOT inferior to 18/30.

In the after sessions the exam will include all the topics and will be carried out with the following modalities: test composed of 60 questions with 4 answers, each question has only one correct answer. The time available for delivery is 60 minutes. The answer is evaluated according to the following criterion: 1 point for each correct answer; 0 points for each answer not supplied; -0.20 points for each wrong answer. The exam is considered passed with an evaluation NOT inferior to 18/30.

Those who have passed the partial exam in the January and February sessions will take the part of the test related to the topics covered in the second semester. Those who have not completed or passed the partial test will support the full test.

In the case of a passed test, the student can decide to take the oral exam. In this case the evaluation of the writing will not be taken into account.

In the ordinary and recovery sessions there are no jumps of appeal. The exam program, where not differently specified by the teachers, consists of the topics developed during the course.

Students are asked to verify the effective registration in the appeals in good time. Those who are not regularly enrolled in the esse3 platform will NOT be admitted to the exam.

#### Further information

#### Sustainable development goals - Agenda 2030

[\\$lbl legenda sviluppo sostenibile](#)