

**SINGLE-CYCLE MASTER'S COURSE IN MEDICINE AND SURGERY**

**ACADEMIC YEAR 2023-2024**

**TEACHING DENOMINATION**

**Integrate Course of HUMAN ANATOMY 1**

**Teaching of SEMIOLOGY OF NORMAL JOINTS**

Main information on teaching	
Year of study	<i>II</i>
disbursement period	<i>I SEMESTER</i>
University credits (CFU/ETCS):	<i>1 CFU</i>
SSD	<i>MED/33 ( Diseases of the locomotor system)</i>
Delivery language	<i>English</i>
Frequency mode	<i>Obligatory, mandatory attendance (≥67% of total hours)</i>

Professor	
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Site	<i>Orthopedic Clinic</i>
Virtual site	<i>Microsoft Teams</i>
Receipt	<i>To be agreed, upon reservation by email</i>

Organization of teaching			
Hours			
Totale	Frontal teaching	Practice (laboratory, field, tutorial, other)	Individual study
<i>24</i>	<i>12</i>	<i>0</i>	<i>12</i>
CFU/ETCS			

<b>Training objectives</b>	<p>The educational activity aims to convey to students the knowledge necessary for understanding the following fundamental aspects of human morphology:</p> <p>All systems/apparatuses meet specific functional needs. All systems/apparatuses comprise various organs functionally interconnected with each other. The cardio-circulatory, nervous, and endocrine systems oversee the functional interconnection among all anatomical systems. Based on this, knowledge of the following main concepts will be required:</p> <ol style="list-style-type: none"> <li>a. Normal macroscopic structure of the major organs and systems, with particular emphasis on their topographical arrangement, including their vascularization, lymphatic drainage, and innervation.</li> <li>b. Microscopic structure correlated with function.</li> <li>c. Functional considerations applied to understanding morphological structure.</li> </ol>
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	<p>The course is structured regionally/topographically with frontal teaching hours and interactive laboratories including Surface Anatomy, Regional and Topographic Anatomy on Anatomage Table, and Microscopic Anatomy laboratories, all conducted with small groups of students. While addressing body regions and the organs and systems therein, particular attention will also be given to highlighting the possible clinical implications resulting from the alteration of normal anatomy.</p> <p>The educational activity aims for the student to achieve both macroscopic morphological and microscopic structural knowledge of the human body, relative to all apparatuses and systems except for the central and peripheral nervous systems.</p>
<b>Prerequisites</b>	For a fruitful study and for adequate comprehension of the educational materials, it is noted that the following prerequisite is required: knowledge of cellular biology, physics, chemistry, human histology, and embryology.

<b>Teaching methods</b>	Frontal teaching carried out through lessons held "ex cathedra" by the teacher with implementation both with forms of active teaching based on the reciprocity of action between teacher and student and with forms of interactive teaching consisting of presenting clinical cases to students, stimulating them to look for the solution through attempts guided by the teacher through opinions, suggestions, explanatory hypotheses. Computer systems will be used during the lesson (PowerPoint presentations, videos, bibliographic searches on web platforms such as PubMed, Scopus, ISI Web, Google Scholar, etc.).
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<b>Expected learning outcomes</b>	
<b>DD1 Knowledge and understanding</b>	The course aims to present the anatomical-functional characterization of the human body both at macroscopic and microscopic levels, including ultrastructural dimensions, within the temporal framework ranging from embryonic development to organogenesis, somatic growth, and ageing.
<b>DD2 Applied knowledge and understanding</b>	At the end of the course, the student should be familiar with the essential morphological and biomechanical characteristics, the functioning modes, and the general control mechanisms of the systems, apparatuses, organs, tissues, and cells of the human body, as well as their main morpho-functional correlates under normal conditions.
<b>DD3-5 Transversal skills</b>	<p>Knowledge and understanding - (Dublin Descriptor 1) Upon completion of the course, the student knows and understands the morphology, structural, and functional organization of the human body at macroscopic, microscopic, and ultrastructural levels of systems and organs.</p> <p>Applied knowledge and understanding - (Dublin Descriptor 2) At the end of the course, the student possesses the ability to link the macroscopic, structural, and ultrastructural organization of systems, apparatuses, and organs with their corresponding functions. The student recognizes the macroscopic structure of systems and organs, connecting it with the notions of surface anatomy, topographic anatomy, radiology, and clinical anatomy. They identify and interpret anatomical regions and structures. Additionally, they can apply anatomical knowledge in solving problems related to physiology, pathology, instrumental physical examination, and anatomoclinical correlates.</p> <p>Autonomy of judgment - (Dublin Descriptor 3)</p>

	<p>At the end of the course, the student will have the ability to integrate their anatomical knowledge, managing its complexity, with data from physiology, physiopathology, and physical and instrumental semiotics. The student will be able to formulate judgments on anatomical alterations and their implications in the main physiopathological processes leading to the most common pathological states; they must refer to their knowledge of anatomy in performing physical examination manoeuvres and in interpreting instrumental semiotics data. By the end of the course, the student must be able to integrate the knowledge and skills acquired to recognize the differences between physiological and non-physiological anatomical structures.</p> <p>Communicative skills - (Dublin Descriptor 4) At the end of the course, the student will have the ability to describe and explain the normal morphology and structure of the human body, also being able to effectively use the communicative tools typical of publications and scientific communications.</p> <p>Learning ability - (Dublin Descriptor 5) At the end of the course, the student will have acquired the ability for autonomous updating on the contents of human anatomy, using the updating methodologies specific to scientific investigation in the biomedical field.</p>
<b>Teaching contents</b>	
<b>Program</b>	Articular semiotics: Planes and axes of the body; joint movements and semiotics of the shoulder, elbow, wrist and hand. Joint semiotics and movement of the spine, hip, knee, ankle and foot.
<b>Reference texts</b>	<p>Kapandji A. D.- The physiology of the joints - Lower Extremities Kapandji I. A. - Physiology of the Joints (Upper Extremities) Kapandji I. A. - The Physiology of the Joints_ The Trunk and the Vertebral Column Elsevier Limited.</p> <p>Bruce Reider, THE ORTHOPAEDIC PHYSICAL EXAMINATION, 2/e 0-7216-0264-9 Copyright 2005, Elsevier, Inc.</p>
<b>Notes to reference texts</b>	PubMed – SCOPUS – WOS - Google Scholar
<b>Teaching materials</b>	Notes provided by the teacher in digital format (Word file, PDF, Power-Point, etc.) will be uploaded and usable for at least 3 years on Microsoft Teams in the TEAM class.

<b>Assessment</b>	
<b>Learning assessment methods</b>	<p>The verification of learning takes place through an oral test where the topics of the questions are relevant to the topics covered during the lessons, as part of the Course.</p> <p>The purpose of the test is to highlight the level of specific knowledge achieved by the student, evaluate the ability to orient oneself in the problems covered, evaluate the skills acquired regarding the proposal of solutions to the problems being studied.</p>
<b>Evaluation criteria</b>	<p><i>In order to demonstrate that the learning outcome has been achieved and what level has been reached, the following will be taken into account:</i></p> <ul style="list-style-type: none"> <li>• <i>Knowledge and understanding:</i> <i>Ability to discursively organize knowledge (unsatisfactory, adequate, good, excellent)</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Applying knowledge and understanding:</i> <i>Decision-making competence in using learned clinical reasoning</i> <i>(unsatisfactory, adequate, good, excellent)</i></li> <li>• <i>Autonomy of Judgment:</i> <i>Critical reasoning skills (unsatisfactory, adequate, good, excellent)</i></li> <li>• <i>Communication knowledge and understanding:</i> <i>Quality of presentation and competence of specialist vocabulary</i> <i>(unsatisfactory, adequate, good, excellent)</i></li> <li>• <i>Capacity to continue learning:</i>  <i>Adequacy and effectiveness in the ability to learn from self-study</i> <i>(unsatisfactory, adequate, good, excellent)</i></li> </ul>
<p><b>Final exam and grading criteria</b></p>	<p>The assessment of final exam takes place collegially (with the Professor of the other modules of the integrated course) through an oral interview. The topics of the questions will be relevant to the topics covered during the lessons, as part of the Course.</p> <p>The grade of the exam is given out of thirty (30), the exam passed when a score greater than or equal to 18.</p> <p>To achieve a high evaluation, the student must have developed independent judgment and adequate argumentation and presentation skills; therefore, honors may be awarded at the discretion of the President after having consulted collegially with the teachers of the modules of the Integrated Course.</p>