

Course Title	Anatomy and Histology I				
Course Code	NURS101				
Course Type	Compulsory				
Level	Bachelor (Level 1)				
Year / Semester	1 st Year / 1 st Semester				
Instructor's Name	Dr Georgios Charalambous, Dr George Miltiadous, Dr Charis Neocleous				
ECTS	6	Lectures / week	3	Laboratories / week	1
Course Objectives	<p>The main objective of the course is to familiarise students with the descriptive, topographic, and especially with the clinical anatomy, as well as to introduce students to human histology. A focus will be put on the understanding of the structure and the architecture of the internal organs and the systems of the human body and the interaction between those systems. To provide students with a thorough understanding of the microscopic appearance and function of normal structures in the human body so that to integrate this information with other disciplines such as Anatomy, Pathology, Physiology and Embryology.</p>				
Learning Outcomes	<p>By the end of the course, students are expected to be able to:</p> <ul style="list-style-type: none"> - Acquire a basic background in histology, to understand the properties of cells and their interactions with one another, as components of tissues and organs and to understand how structure and function correlate at microscopic level. - Describe the surface anatomy of the human body. - Describe the normal structure and function of various cell types, tissues, and organs. - Recognize, identify and describe the characteristic structures of cells and tissues of the human body - Define the characteristics of tissues of the human body (epithelium, connective, muscle, nerve) and their relationships in the various organ systems of the human body. - Define the anatomic relations of the various anatomic structures of the human body. - Describe and name the elements of every simple or complex musculoskeletal structure of the human body and understand their role, as well as the structure and function of the musculoskeletal system. - Describe, define and name the anatomic parts of the systems and the internal organs of the human body. - Describe the histological structure of the various structures of the human body. - Analyse the relation between the anatomic, histological and cellular 				

	structures of the human body with the normal and abnormal clinical profile.		
Prerequisites	No	Required	No
Course Content	<p>Theory:</p> <p><u>Introduction to the science of Anatomy and Histology</u></p> <ul style="list-style-type: none"> - The structure of cells and tissues. - The function of the cell core, the cytoplasm, the organelles and the cell membrane. - The process of cell division (mitosis and meiosis), the development and reproduction of the autosome and reproductive cells. - The main parts of the human body, the axes and the levels of division of the human body. - Morphology of epithelial, connective, adipose, cartilage bone, muscle and nervous tissue. <p><u>Musculoskeletal System</u></p> <ul style="list-style-type: none"> - Osteology: Human skeleton, construction of bones, bone types and their structure, - The bones of the skull. - The spine (cervical vertebrae-thoracic vertebrae - lumbar vertebrae-sacral and coccygeal vertebrae). - Common features of the vertebrae. - Specific features of the vertebrae. - Specific features of the cervical vertebrae. - Bones of the chest. The ribs and the sternum. - Bones of the upper and lower limbs. - Joints, Types, The main joints of the human body (main and auxiliary). - Types of muscles (skeletal or smooth-heart muscle). - Main muscles of the human body: muscles of the cervix-the chest-the abdomen- muscles of the posterior surface of the trunk -muscles of the limbs- the diaphragm. <p><u>Cardiovascular System</u></p> <ul style="list-style-type: none"> - Morphological organization and development of the cardiovascular system. - Heart (valves, pericardium, myocardium, endocardium), coronary arteries- stimulatory system (sinus node-atrioventricular node-bundle of His). - Arteries and veins. <p><u>Respiratory System</u></p> <ul style="list-style-type: none"> - Morphological organization and development of the respiratory system. - Airways: nasal-pharynx-larynx-trachea-bronchi. - Lungs: position-shape- anatomic particles (lobes, slits, gates) - microscopic anatomy: alveoli. - Pleural cavity and pleural fluid <p><u>Elements of Embryology I</u></p> <p>Laboratory:</p>		

	<ul style="list-style-type: none"> - Cells and Tissues (Microscopes) - Osteology: Bones of the Skull, Thorax, Pelvis, Spine, Upper and Lower Limbs - Myology: Muscles of the Skull, Thorax, Trunk, Back, Upper and Lower Limbs. - Joints - Circulatory System - Respiratory System - Superficial Anatomy
Teaching Methodology	<p>Theory</p> <p>The course is delivered to the students through lectures, using computer-based presentations programmes. Case Studies, Discussion, Questions / Answers are also used depending on the content of the lecture. Lecture notes and presentations are available online for use by students in combination with textbooks. Relevant material published in international scientific journals are also used to follow the latest developments related to the subject of the course.</p> <p>Laboratory</p> <p>During the laboratory coursework, students develop their clinical skills and lab assistants demonstrate and explain the human skeleton and body organs in anatomical models, anatomy charts and microscopes for microscopic observation of cells and tissues.</p>
Bibliography	<p>(a) <u>Textbooks:</u></p> <p>Drake, R. L. (2019). <i>Gray's anatomy for students and Paulsen: Sobotta, Atlas of Anatomy</i>. Churchill Livingstone.</p> <p>Gartner, L. P. (2021). <i>Textbook of histology</i>. Elsevier.</p> <p>Paulsen, F. & Waschke, J. (2017). <i>Sobotta, Άτλας Ανατομικής του Ανθρώπου</i> (23^η εκδ.). Εκδόσεις Παρισιάνου. (In Greek)</p> <p>Gartner, L. (2018). <i>Ιστολογία</i> (4^η εκδ.). Εκδόσεις Παρισιάνου. (In Greek)</p> <p>(b) <u>References:</u></p> <p>Carlson, M. (2019). <i>Human Embryology and Developmental Biology</i>. Elsevier Gezondheidszorg.</p> <p>Carlson, M. (2021). <i>Ανθρώπινη Εμβρυολογία Και Αναπτυξιακή Βιολογία</i> (6^η εκδ.). Εκδόσεις Παρισιάνου. (In Greek)</p> <p>Μαυρικακη, Ε. (2015). <i>Άτλας Ανατομίας</i>. Εκδ. Πατάκη (In Greek)</p>

	<p>Watson, R. (2011). Anatomy and Physiology for Nurses. ELSEVIER</p> <p><i>Through the services of the university library, access is provided to electronic repositories of scientific journals and articles, indicatively ProQuest, Cambridge University Press and Science Direct with thousands of scientific journals in the fields of health sciences.</i></p>
Assessment	<p>The evaluation of the course consists of continuous assessments (coursework: mid-term examination, laboratory work evaluation, clinical teaching evaluation, written assignment, active participation in the classroom) and final examination.</p> <p>Mid-term Exam: 30%. A written mid-term exam will be comprised by multiple choice questions, short-answer and open questions.</p> <p>Laboratory assignments: 10%. Laboratory assessment consists of a practical assignment on various topics on Anatomy and Histology.</p> <p>Student participation: 10%. Participation in the classroom includes educational assessments with interactive problem-solving questions.</p> <p>Final Exam: 50%. A written final exam will be comprised by multiple choice questions, short-answer and open questions.</p>
Language	Greek / English