General Information	
Academic subject	HUMAN ANATOMY
Degree course	BIOLOGICAL SCIENCE
Curriculum	
ECTS credits	9
Compulsory attendance	yes
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Mariasevera Di Comite	mariasevera.dicomite@uniba.it	BIO/16

ECTS credits details	Area		CFU/ETCS
Basic teaching activities	05		

Class schedule	
Period	1st semester
Year	II
Type of class	LECTURES- EXERCISES

Time management	
Hours	222
In-class study hours	92
Out-of-class study hours	151

Academic calendar	
Class begins	OCTOBER 2020
Class ends	JANUARY 2021

Syllabus	
Prerequisites/requirements	KNOWLEDGE OF CYTOLOGY AND HISTOLOGY
Expected learning outcomes	• Knowledge and understanding: Acquisition of theoretical and practical skills on the macroscopic, microscopic, and functional characteristics of the human body's organs and their relationships. These skills will be acquired thanks to lectures and exercises from the individual study and the microscopic anatomy laboratories' verification. • Applied knowledge and understanding: The Human Anatomy course provides for the compulsory participation of students in microscopic anatomy exercises. Under the teachers' constant guidance, students acquire methodological, technological and instrumental application skills to execute histological analyzes indispensable for scientific research. • Autonomy of judgment

	The student will be able to express independent judgment in analyzing the functional and dysfunctional interactions of the various structures of human anatomy, useful for facing a critical evaluation of experimental data or problems that come to his attention. • Communication skills The student must have achieved the appropriate communication skills to be able to present descriptive and problematic aspects related to the structures of human anatomy clearly and concisely with appropriate scientific language (in both oral and written form), also valid for presentations aimed at "Non-experts." • Ability to learn The ability to use the teaching material for a critical and reasoned study is expected, ultimately evolving towards acquiring the ability to investigate and update independently, by reading texts and scientific articles, issues relating to the structures of human anatomy.

Contents	ORGANIZATION OF THE HUMAN BODY - General principles of Anatomy. Three-dimensional organization of the human body: planes of spatial orientation. Anatomical terminology. Movements and displacements in space. Parts and regions of the body, body cavities, serous membranes. Generalities on organs and systems. The general structure of hollow organs and parenchymatous organs. LOCOMOTOR SYSTEM - The supporting connective tissue: bone and cartilage tissue. Morphofunctional characteristics of compact and spongy bone tissue. Bone growth and remodeling, calcium homeostasis. Membranous and endochondral ossification. Axial skeleton and appendicular skeleton. The joints: synarthrosis, amphiarthrosis, and diarthrosis. Classifications of diarthrosis based on the shape of the articular surfaces. The structure of the articular cartilage. Organization and morpho-functional characteristics of striated muscle tissue. Fast and slow-twitch muscle fibers. Cardiac smooth and striated muscle. CARDIOVASCULAR SYSTEM - Great circulation and small circulation. The heart: headquarters and relationships. External and internal conformation of the heart. Heart valves. Organization of the endocardium, myocardium and epicardium. Conduction system. Fibrous pericardium and serous pericardium. Structure of blood vessels: elastic and muscular arteries, receptor and propeller-type veins, capillaries. Arteriovenous anastomosis. System of the aorta, inferior and superior vena cava and portal vein. Blood cells. LYMPHATIC CIRCULATORY SYSTEM AND LYMPHOPOIETIC ORGANS - structure of the lymphatic vessels and outline the lymphatic circulatory system. Morphology, relationships and structure of lymph nodes, thymus, spleen and bone marrow. Thymic and medullary lymphocytopoiesis. Lymphoid tissue associated with mucous membranes. RESPIRATORY SYSTEM - Morphology, relationships and structure of the upper and lower airways: nose, nasopharynx, larynx, trachea and main bronchi. Architecture and structure of the lungs. Bronchial tree. Structure of the intrapulmonary bronchi. Pulmonary acinus, alveolar epithelium and connective vascular lamina of the alveolar wall. Vessels and nerves of the lung. The pleurae. DIGESTIVE SYSTEM - Morphology, relationships and structure of the digestive tract and the attached glands: oral cavity, teeth, tongue, salivary glands, palatine tonsil, pharynx, esophagus, stomach, small and large intestine. Liver, intrahepatic and extrahepatic biliary tract, pancreas. Behavior of the peritoneum. Notes on the vessels and nerves of the digestive system.

	UROPOIETIC SYSTEM - Morphology, relationships and structure of the kidney. Renal lodge. Behavior of the peritoneum. The nephron. Juxtaglomerular apparatus. Morphology, relationships and structure of the urinary tract: minor and major calyxes, pelvis, ureter, urinary bladder male and female urethra. Notes on the vessels and nerves of the uropoietic apparatus. MALE GENITAL SYSTEM - Morphology, relationships and structure of the testicle and spermatic ducts. Scrotum. Testicular cassock: cremasteric fascia, cremaster muscle, common vaginal cassock, proper vaginal cassock. Spermatic cord. Male urethra and related glands. Perineum. External genitals. Notes on the vessels and nerves of the male genital system. FEMALE GENITAL SYSTEM - Morphology, relationships and structure of the ovaries, uterine tubes and uterus. Behavior of the peritoneum. Ovarian cycle and menstrual cycle. Vagina, feminine pudendal. Notes on the vessels and nerves of the female genital system. ENDOCRINE SYSTEM - Morphology, relationships and structure of the endocrine glands: pituitary, epiphysis, thyroid, parathyroid, adrenal gland, structure of the pancreatic islets, the interstitial gland of the testicle and ovary and corpus luteum. Notes on the vessels and nerves of the endocrine system. NERVOUS SYSTEM - The nervous tissue. The synapses. The meninges, the cerebral ventricles and the cerebrospinal fluid. Structure of gray matter and white matter. The spinal cord. The reflections. Structure of the brain stem: bulb, pons, midbrain. Generalities on the cranial nerves. The cerebellum. Structure of the cerebellar cortex. The diencephalon: thalamus, subthalamus, epithalamus and hypothalamus. The telencephalon: nuclei of the base, semi-oval center. Structure of the cerebral cortex, cerebrocortical areas. The limbic system. Exteroceptive, proprioceptive and intoceptive sensitivity. Ascending and descending routes. The autonomic nervous system. Notes on receptors and sense organs.
Course program	
Bibliography	Castano P. e Donato R.F. Anatomia Dell'Uomo Edi-ermes Elaine N Marieb Elementi di anatomia e fisiologia dell'uomo Zanichelli Barbatelli e altri Anatomia Umana Fondamenti Edi-ermes (Sostituisce l'Ambrosi) Seeley, Stephens,Tate Anatomia (II edizione) Idelson-Gnocchi Bareggi Anatomia Umana Idelson-Gnocchi Tillmann B.N. Atlante di Anatomia Umana Zanichelli Morroni Anatomia Microscopica Edi-ermes Martini Anatomia Umana EdiSES
Notes	None

Teaching methods	The course aims to provide the student with knowledge relating to the morphology, topography, and function of the human body's various organs. It is organized in lectures (8.5 CFU) during which the teacher makes use of PowerPoint presentations and uses anatomical models of parts of the human body and human organs. To make the lessons more usable and for greater student participation, part of the course will be integrated with exercises in the microscopic anatomy of histological preparations (0.5 CFU). Some lessons will also be dedicated to the study of three-dimensional anatomy, using dedicated software. During the course, the teacher-student dialogue will be encouraged for clarification and further information on the topics covered.
Assessment methods	• Oral examination • Ongoing test (optional)
Evaluation criteria	• An optional ongoing test on the Nervous System is provided (valid for 12 months). • The Human Anatomy exam consists of the description of an organ and the recognition of a microscopic anatomy preparation chosen from those illustrated during the exercises. The evaluation criteria take into account the degree of knowledge of the subject, the clarity of the exposition, the property of language, the use of anatomical terminology and the ability to establish logical links between topics.
Further information	none