

Main course information	
Academic subject	Human anatomy
Degree course	Biological science
Degree class	L-13
ECTS credits (CFU)	9
Compulsory attendance	yes
Teaching language	Italian
Accademic Year	2019/2020

Professor/Lecturer	
Name & SURNAME	Mariasevera Di Comite
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Tutorial time/day	From monday to thursday from 9.00 to 12.00

Course details	Pass-fail exam/Exam with mark out of 30	SSD code	Type of class
		BIO 16	Lecture/workshop

Teaching schedule	Year	Semester
	II	I

Lesson type	CFU/ECTS	Lessons (hours)	CFU/ECTS lab	Lab hours	CFU/ECTS tutorial/workshop	Tutorial/workshop hours	CFU/ECTS field trip	Field trip Hours
	8.5	68	0	0	0.5		0	0

Time management	Total hours	Teaching hours	Self-study hours
	225	92	133

Academic Calendar	First lesson	Final lesson

Syllabus	
Course entry requirements	knowledge of histology
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	
<i>Knowledge and understanding</i>	Acquisition of theoretical and practical skills on the macroscopic, microscopic and functional characteristics of the organs of the human body and their topographical and functional relationships. These skills will be acquired thanks to the frequency of frontal lessons and exercises, individual study and verification during the microscopic anatomy laboratories.
<i>Applying knowledge and understanding</i>	The Human Anatomy course involves the compulsory attendance of students in microscopic anatomy exercises in which, under the constant guidance of the teachers, they acquire methodological, technological and instrumental knowledge for the execution of histological analyses indispensable for scientific research
<i>Making informed judgements and choices</i>	During the course of Human Anatomy students are repeatedly stimulated to develop critical skills. Good knowledge of the topics covered will constitute the starting point necessary to develop an independent judgment.
<i>Communicating knowledge and understanding</i>	In order to achieve good communication skills, knowledge of the anatomical nomenclature and the different levels of organization of the human body through macro and microscopic scales is essential.
<i>Capacities to continue learning</i>	Capacities to continue learning are also assessed by means of ongoing tests

## Syllabus

### Course content

**ORGANIZATION OF THE HUMAN BODY** - General principles of Anatomy. Three-dimensional organization of the human body: spatial orientation plans. Anatomical nomenclature. Movements and displacements in space. Parts and regions of the body, cavities of the body, serous membranes. General information on organs and systems. General structure of the hollow organs and parenchymatous organs.

**LOCOMOTOR SYSTEM** - Supportive connectives: bone and cartilaginous tissue. Morphofunctional characteristics of compact and spongy bone tissue. Bone growth and remodeling, calcium homeostasis. Membranous and enchondral ossification. Axial skeleton and appendicular skeleton. Joints: synarthrosis, amphiarthrosis and diarthrosis. Diarthrosis classifications based on the shape of the joint surfaces. The structure of articular cartilage. Organization and morpho-functional characteristics of striated muscle tissue. Fast and slow twitch muscle fibers. Smooth and cardiac muscle.

**CARDIOVASCULAR SYSTEM** - Great circulation and small circulation. The heart: location and relationships. External and internal conformation of the heart. Heart valves. Organization of the endocardium, myocardium and epicardium. Conduction system. Fibrous and serous pericardium. Structure of blood vessels: elastic and muscular arteries, receptor-type and propeller veins, capillaries. Arteriovenous anastomoses. Aorta system, inferior and superior vena cava, and portal vein. Blood cells.

**LYMPHATIC CIRCULATORY SYSTEM AND LYMPHOPOIETIC ORGANS:** structure of lymphatic vessels, outline of systematics of 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 intrapulmonary bronchi. Respiratory bronchiolar unit, alveolar epithelium and connective lamina of the alveolar wall. Lung vessels and nerves. Pleural sac.

**DIGESTIVE SYSTEM** - Morphology, relationships and structure of the digestive tract and annexed glands: oral cavity, teeth, tongue, salivary glands, palatine tonsil, pharynx, esophagus, stomach, small and large intestine. Liver, intrahepatic and extrahepatic bile ducts, pancreas. Peritoneum behavior. Notes on the vessels and nerves of the digestive system.

**UROPOIETIC SYSTEM** - Morphology, relationships and structure of the kidney. Renal lodge. Peritoneum behavior. The nephron. Juxtaglomerular apparatus. Morphology, relationships and structure of the urinary tract: minor, major, pelvic, 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 sperm pathways. Scrotum. Testicle Ruff: cremasteric fascia, cremaster muscle, common vaginal robe, own vaginal robe. Spermatic cord. Male urethra and attached glands. Perineum. External genitals. Notes on the vessels and nerves of the male genital system.

**FEMALE GENITAL SYSTEM** - Relationship morphology and structure of the ovaries, uterine tubes and uterus. Peritoneum behavior. Ovarian cycle and menstrual cycle. Vagina, pudendal feminine. Notes on the vessels and nerves of the female genital apparatus.

**ENDOCRINE SYSTEM** - Morphology, relationships and structure of endocrine glands: pituitary gland, epiphyses, thyroid gland, parathyroid glands, adrenal gland, structure of pancreatic islets, interstitial gland of testis and ovary and corpus luteum. Notes on the

	<p>vessels and nerves of the endocrine system.</p> <p><b>NERVOUS SYSTEM</b> - The nervous tissue. The synapses. Meninges, cerebral ventricles and cerebrospinal fluid. Structure of gray and white matter. The spinal cord. The reflections. Brain structure: bulb, bridge, 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, semioval center. Structure of the cerebral cortex, cerebrocortical areas. The limbic system. Exteroceptive, proprioceptive and interoceptive sensitivity. Ascending and descending pathways. The autonomic nervous system. Notes on receptors and sense organs.</p>
Course books/Bibliography	<ul style="list-style-type: none"> <li>• Anatomia Umana. Fondamenti. Con Istituzioni Di Istologia - Barbatelli et Al. - Edi Ermes</li> <li>• Anatomia Umana e Istologia - Bentivoglio et Al. - Minerva Medica</li> <li>• Anatomia microscopica. Atlante – Morroni- Edi Ermes</li> <li>• Anatomia Dell’Uomo - Castano P. et Al - Edi Ermes</li> <li>• Anatomia - Seeley, Stephens, Tate - Idelson-Gnocchi</li> <li>• Anatomia Generale e Apparato locomotore - Testo Atlante di Anatomia - Schunke et Al - Edises</li> </ul>
Notes	Possibility to download the slides of the lessons from the teacher's uniba page
Teaching methods	Lectures and seminars; direct experience acquired during microscopic anatomy laboratories
Assessment methods (indicate at least the type written, oral, other)	Oral examination
Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are)	<p>Knowledge and understanding: the student will have to show the mastery of knowledge related to the organization of the tissues and the anatomical bases necessary for a correct understanding of the functioning of the human organism with particular regard to the microscopic characteristics of the organs</p> <p>Ability to apply knowledge and understanding: the student will have to show that he has acquired skills, tools and a conscious autonomy of judgment in relation to the analysis of tissues and to demonstrate understanding of the functioning bases of the organs and apparatuses identifying their main task in maintaining the homeostasis of the human body.</p> <p>Autonomy of judgment: the student will have to show the possession of the ability to use the acquired knowledge demonstrating to reason according to the specific logic of the discipline. He must be able to identify the functional correlations between multiple bodies, to extract and summarize the relevant information relating to the body in question.</p> <p>Communication skills: the student must demonstrate to be able to relate, in a precise and exhaustive way, his / her knowledge to people already competent in the field, as well as to demonstrate synthesis skills and to know how to communicate in order to make the topics of the subject accessible to a wider public by adopting always and in any case an adequate and precise terminology.</p> <p>Learning ability: the student will have to demonstrate that he is able to discuss the topics of the program with examples or parallels in an autonomous manner, based on</p>

	what he has learned from the lessons and what he has learned using integrative or autonomously found sources.
Further information	