

ANATOMY	
GENERAL INFORMATIONS	
Course coordinator	Prof. Robert Selthofer, MD, PhD
Assistant/Associate	Assoc. Prof. Antonio Kokot, MD, PhD Assoc. Prof. Igor Lekšan, MD, PhD Marko Sablić, MD
Study Programme	Undergraduate University Study of Medical Laboratory Diagnostics
Status of the course	Obligatory
Year of study, semester	1 st Year. 1 st Semestar
ECTS	5
Workload (hours)	Lectures: 20; Seminars: 5; Exercises: 30
Expected number of students	35
COURSE DESCRIPTION	
Course objectives	
The main goal of this course is for the student to master the basics of the macroscopic morphology of individual organs and organ systems of humans; learn the characteristics of organs, their blood supply and innervation. Acquired and adopted knowledge of anatomy should enable the student to better understand physiological, pathophysiological and pathological processes in the body and to master clinical subjects.	
Enrolment requirements and entry competencies	
There are no special requirements for this course except those defined by the curriculum of the entire study program.	
Learning outcomes at the Programme level	
1.1, 2.6, 2.7	
Learning outcomes at the course level	
After completing lectures, seminars and exercises, independent study and passing the exam, students will be able to: <ol style="list-style-type: none"> 1. determine the anatomical nomenclature. 2. interpret parts and individual anatomical structures of organs. 3. explain the topographic relationships of individual anatomical structures. 4. critically review the existence of anatomical anomalies and differences in relation to textbook descriptions of the so-called "standardized body". 5. support practical work with a dead human body. 6. evaluate the significance of the donation program on anatomy. 	
Course content	
<p>Lectures: Introduction to anatomy. Acquaintance of the student with anatomical terminology and the foundations of the organization of body systems. Introduction to osteology. Division and role of bone substance in bones: compact and spongy, division of bones into basic types according to external characteristics: long, short, plate and irregular, and subtypes (pneumatic, sesamoid, accessory). Ossification, primary and secondary centers of ossification, epiphyseal plates (tractional and compressive) and epiphyseal lines. Trunk bones. Upper limb skeleton. Skeleton of the lower extremities. Bones of the neurocranium. Bones of the viscerocranium. Introduction to syndesmology. Division of synovial joints according to the shape of the articular bodies. Axes and planes of motion and functional anatomy of joints. Organization (structure and function) of articular cartilage and elements of the articular capsule. Ligaments: division and types in relation to the joint cavity and joint capsule. Relationship between joint stability and mobility and basic biomechanical principles. Trunk joints. Joints of the upper edges. Joints of the lower edges. Introduction to myology (types of muscle tissue according to structure, function and distribution in the human body). Structural components of skeletal muscle and division according to the shape of the muscle</p>	

belly, regressive and atavistic muscle variations. Tendons, aponeuroses. Fasciae and retinaculi, fascial and muscle partitions, tendon sheaths. Relationship between form (and appearance of muscles) and function, interrelationship of fiber length, range of motion and strength of muscle contraction. Muscle biomechanics, muscle tone and contraction. Division of muscles according to functions (agonists, synergists, antagonists, fixators), isometric and isotonic contraction. Trunk and back muscles. Muscles of the upper extremities. Muscles of the lower extremities. Morphology of the central nervous system. Development of the brain, membranes, cerebrospinal fluid spaces and blood vessels of the brain. The parasympathetic system in the head and neck area. Ear. Eye. Nose and paranasal sinuses. Oral cavity. Pharynx and parapharyngeal spaces. Principles of structure of spinal nerves. Front wall of the abdominal wall. Middle chest, trachea and lungs. Heart. Development of the mesentery. Organs of the digestive system. Urinary system. Female and male genitals.

Seminars: Locomotor system. Morphology of the central and peripheral nervous system. Chest cavity, lungs and heart. Digestive system. Urogenital system.

Exercises: Recognition and differentiation of the structures of the human body (cadaver): skeleton and bone joints of the head, spine, arm skeleton, leg skeleton, joints and joints of the spine, shoulder joint, elbow joint, wrist joint and finger joints, hip joint, knee joint, ankle joint. Shoulder muscles. Muscles that connect the trunk to the shoulder girdle. Chest muscles that move the upper. Muscles of the upper arm Muscles of the forearm (extensors and flexors) and hand (thenar and hypothenar, interosseous and lumbrical). The muscles of the small pelvis. Muscles of the upper leg. Calf and foot muscles. Morphology of the central and peripheral nervous system. Brain nerves. The parasympathetic system in the head and neck area. General organization of autonomic nervous system fibers, parasympathetic and sympathetic ganglia in the head and neck area. Topographical organization of the face and neck regions, anatomy of the pharynx and parapharyngeal spaces. Trachea, trachea, lungs (accommodation, lobes, hilus), pleura (borders, pleural sinuses), lung lymph. Heart. Thoracic lymphatic duct. Blood vessels: aorta, branches of the aortic arch, thoracic aorta and branches, truncus pulmonalis, vena cava superior, venae brachiocephalicae, vena azygos, vena hemazygois. What a hose. The large intestine. Appendix. Appendix. Large intestine Blood vessels: aorta abdominalis with branches, inferior vena cava, portal blood flow system and its connection with other systems. Abdominal lymph. Abdominal wall muscles. Canalis inguinalis. Peritoneum, mesogastrium, mesentery and mesocolon. Nerves: plexus lumbalis et sacralis with branches. Stomach, duodenum, spleen, pancreas. Liver and bile ducts, gall bladder. Kidneys, adrenal glands, ureters. Bladder. Urethral tube (men and women). Male reproductive organs: testis, epididymis, vas deferens, seminal vesicle, prostate gland, bulbourethral gland, external genitalia. Female reproductive organs: ovary, fallopian tube, uterus, birth canal, external genitalia. Blood vessels: a. et v. iliaca comunis, a. et v. iliaca interna with branches, a. et v. iliaca externa, a. et v. testicularis s.ovarica. Topographical anatomy of the shoulder girdle, upper arm, forearm and hand regions. Topographical anatomy of the pelvis, upper leg, lower leg and foot regions.

Mode of teaching

Lectures, Problem solving seminars, exercises

Student obligations

Attending all forms of classes is mandatory, and the student must pass all knowledge tests. A student can excuse himself from 30% of each form of teaching. Undone exercise must be graded.

Monitoring student work (Connectivity of learning outcomes, teaching methods and grading)

The progress of students and their work on the subject is continuously monitored through knowledge checks at seminars and exercises and through a system of constant consultations.

Teaching activity	ECTS	Learning outcome	Student activity	Assessment methods	Grade points	
					Min.	Max.
Seminars	2	1-10	Preparation of seminar	Seminar presentation	12	24
Exercises	1	1-10	entrance exams, performing exercises, keeping work diary	work diary, entrance exam	3	6
Knowledge test (partial exams)		1-10	Studying for partial exams	2 partial exams		
Final exam		1-10	Studying for the final exam	Written exam	13	25
				Oral exam	22	45
Total					50	100

Evaluation of the final written exam:

Percentage of correct answers (%)	Ocjenski bodovi
>95.00	23-25
90.00-94.99	20-22
85.00-89.99	18-19
80.00-84.99	15-17
75.00-79.99	13-14
70.00-74.99	10-12
65.00-69.99	8-9
60.00-64.99	5-7

Calculation of final grade:

Grade points obtained during classes (exercises and seminars) and the written part of the final exam are joined by points obtained in the oral exam. Grading is done by absolute distribution, i.e. based on the final achievement and is compared with the numerical system as follows:

A – excellent (5): 80-100 evaluation points; B – very good (4): 70-79.99 grade points; C – good (3): 60-69.99 grade points; D – sufficient (2): 50-59.99 grade points.

Required reading (available in the library and through other media)

Title	Number of copies in the library	Availability through other media
Bajek, Bobinac, Jerković, Malnar, Marić: Sustavna anatomija čovjeka, Digital point d.o.o., Rijeka 2007.	7	
Keros P., Pećina M., Ivančić-Košuta M.: Temelji anatomije čovjeka, Medicinska biblioteka, Zagreb 1999	7	
Sobotta: Atlas anatomije čovjeka, Urban and Schwartzenberg, Munchen, 1983.	11	

Additional reading

1. Bobinac D., Dujmović M.: Osnove anatomije, Glosa, Rijeka, 2003.

Course evaluation procedures

An anonymous, quantitative, standardized student survey about the subject and the work of teachers conducted by the Quality Office of the Faculty of Medicine Osijek.