

<i>Name of the course</i>	<b>ANATOMY</b>			<b>Course code</b>	
<i>Type of study program Cycle</i>	Integrated university study, medicine			<b>Year of study</b>	I
<i>ECTS points value:</i>	<b>18</b>	<i>Semester</i>	II.	Number of hours per semester (l+s+p)	210 (60+62+88)
<i>Course status:</i>	Mandatory	<i>Preconditions:</i>		<i>Comparative conditions:</i>	
<i>Course attendance:</i>	First year students of medicine			<i>Hours of instructions:</i>	According to the schedule
<i>Holder of the course/lecturer:</i>	Assist. Prof. Marko Ostojić, MD, PhD.				
<i>Contact hours/consultations:</i>					
<i>E-mail and phone number:</i>	dr.ostojic@gmail.com				
<i>Assistant</i>	Josip Lesko MD.; doc.dr.sc.Marko Ostojić MD.; dr. sc. Pejana Rastović MD.; doc. dr.sc. Josip Novaković MD.; doc. sc. Josip Mišković MD.; Zdenka Zovko, dipl. ing.				
<i>Contact hours/consultations:</i>	Every working day, some staff member will be available.				
<i>E-mail and phone number</i>					
<b><i>The aims of the course:</i></b>	<p>The objectives of this course are:</p> <p>To learn and understand the structure of the human body.</p> <p>Provide means so students may acquire knowledge of the human body's structure through systematic and topographic anatomy, thereby enabling them to understand the normal and pathological morphology of the human body, the relationship between surface forms and deeper structures, as well as the interdependence of these structures as the framework of life processes.</p> <p>Thorough understanding of the clinical relevance of certain regions and the spatial orientation within the human body.</p> <p>Understanding the systematic, functional and topographic anatomy of all regions, as well as the functional anatomy of the locomotor system, cardiovascular, respiratory, digestive, urinary and reproductive systems, central and peripheral nervous system, including the basics of the organization of major motor and sensory systems.</p> <p>Systematic anatomy: organ characteristics, their blood supply, and innervation. According to this approach, the bodies are grouped according to a common function. The emphasis is on the general anatomic principles important for understanding the structure and function of the human body.</p> <p>Topographic anatomy: the characteristics of organs regarding to their accommodation and correlation with surrounding structures (position in the body). All organs are part of a body system and anatomical region.</p>				
<b><i>Learning outcomes(general</i></b>	<p><u>General outcomes:</u></p> <ul style="list-style-type: none"> <li>- Apply self-study methods through the course in a critical and</li> </ul>				

<p><b><i>and specific competencies):</i></b></p>	<p>self-critical questioning of scientific truths</p> <ul style="list-style-type: none"> <li>- Demonstrate possession of personal qualities (teamwork and personal contribution, interest, active listening and building positive relationships with group members)</li> </ul> <p><u>Specific outcomes:</u>  Student applies, explicates (interprets, observes, explains):</p> <ul style="list-style-type: none"> <li>- The structure of the human body, the basic theoretical settings of the systemic and topographic anatomy of the human body, the shape and structure of the organ in the order in which they belong to the organic system, the holotopic, skeletotopic and topographic relations of organs in the body irrespective of which organ system they belong to.</li> <li>- Masters the skill of anatomical section.</li> <li>- Identifies and shows normal human macro morphology. Shows and explains the organs of the system and the regions of the human body. Identifies and shows details of the specimens.</li> </ul> <p>The outcomes will be evaluated through continuous knowledge checking, active learning forms during lectures and seminars, and on the final exam (MCQ test, practical and oral exam)..</p>			
<p><b><i>Content of the syllabus/ performance plan (in short):</i></b></p>	<p>Teaching consists of everyday lectures, seminars and practical exercises. After the lecture the same topic is discussed at the seminar with a slightly different, practical approach. The seminar is conceived as an interactive form of teaching. Through practical exercises, students apply the taught material.</p>			
<p><b><i>Format of instruction (mark in bold)</i></b></p>	<p><b>Lectures</b></p>	<p><b>Exercises</b></p>	<p><b>Seminars</b></p>	<p>Independent assignments</p>
	<p>Consultations</p>	<p>Mentorship</p>	<p>Field work</p>	<p>Other</p>
	<p>Remarks:</p>			
<p><b><i>Student responsibilities:</i></b></p>	<p>Students must attend classes on time. Students are obliged to take a colloquium for each absence, and any tardiness will be treated as absence. The colloquium is a short oral exam in which a student demonstrates that he/she has mastered the basics of the material. Passed colloquium is a requirement for the partial exam. On practical exercises, students are required to have a clean and neatly ironed white coat. Students with long hair are obliged to tie their hair (pony tail). Nails need to be neatly cut. Students are obliged to prepare the material for each day in advance.</p>			
<p><b><i>Student monitoring and evaluation (mark in bold)</i></b></p>	<p>Class attendance</p>	<p>Class activities</p>	<p>Seminars</p>	<p>Practical knowledge</p>
	<p><b>Oral exam</b></p>	<p><b>Written exam</b></p>	<p><b>Continuous assessment of knowledge</b></p>	<p>Essay</p>

<b>Detailed review of grading</b> within the European Credit Transfer System			
<b>STUDENT OBLIGATIONS</b>	<b>HOURS (ESTIMATION)</b>	<b>ECTS PORTION</b>	<b>GRADE PORTION</b>
Class attendance and engagement	30	1	0%
Practical work	90	3	20%
Colloquium (2) or written exam	240	8	50%
Oral exam	180	6	30%
<p>Additional explanations:</p> <p>The anatomy exam consists of three parts: written, practical, and oral.</p> <p>During the course, three written partial exams will be held. The partial exam consists of 50 MCQs with five offered answers but only one is a correct answer. Each question bears exactly one point.</p> <p>Also, during classes, students will write a 'short test' every day. Testing is not graded (only pass/fail is evaluated) and depending on the success the student can get up to five additional points on a partial exam that is summed up with the correct answers.</p> <p>Based on the total number of points (correct answers from the partial exam + extra points), the partial exam is evaluated as follows:</p> <p>45-50 points = grade 5 (excellent)  40-44 points = grade 4 (very good)  35-39 points = grade 3 (good)  30-34 points = grade 2 (sufficient)</p> <p>Once passed the partial exam is valid for the whole academic year and that part of the material will not have to be written again.</p> <p>For students who pass all three partial exams during the course, the so-called preterm will be held (examination deadline immediately upon completion of classes). Those students then attend the practical exam.</p> <p>On the practical exam, 25 anatomical structures will be marked on the specimens that were previously used in the practical exercises. All kinds of specimens can be considered – native human, plastinated, plastic models as well as donor cadavers. For the pass in the practical part, the student must properly name and write at least 20 marked structures.</p> <p>After passing the practical exam, the oral part follows. On an oral exam, the student draws 7 cards with questions that are divided into the same number of categories. The student must orally show basic knowledge from all categories he/she has drawn to make his answer satisfactory.</p> <p>The final grade is calculated based on the average grade of the written and oral part.</p>			

Students who did not pass all three partial exams during course attend regular summer and autumn terms. In order to attend the practical and oral part of the exam, students must first pass a written part that consists of material which was not passed during the partial exams. On regular terms the students write an exam that consists of 50, 100 or maximum 150 questions depending on previously passed partial exams. After completing the written part in a regular term, students partakes in the practical and oral exam in the same manner as the preterm mentioned above.

According to the Rule Book, the final grade is obtained as follows:

- A = 90-100% 5 (excellent)
- B = 80 to 89% 4 (very good)
- C = 70 to 79% 3 (good)
- D = 60 to 69% 2 (sufficient)
- F = 0 to 59% 1 (inadequate)

<b>Required literature:</b>	Drake, Vogl, Mitchell: Gray's Anatomy for Students. Elsevier, Churchill Livingstone, third edition, 2015 F. Netter: Atlas of Human Anatomy. Elsevier - Health Sciences Division. Any edition.
<b>Optional literature:</b>	K. Moore: Clinically Oriented Anatomy. Lippincott Williams & Wilkins, sixth edition, 2010. J. Sobotta: Atlas of Human Anatomy. Urban & Schwarzenberg. Any edition.
<b>Additional information on the course:</b>	Student Survey Analysis of the quality of teaching by students and teachers Passage analysis on exams Report of the Office for Quality of Teaching Out-of-institutional Evaluation (visit of the Quality control teams)

Annexes: class calendar (This is a list of all the classes. The exact schedule may not be in this very order.

<b>Unit number</b>	<b>SUBJECT MATTER AND LITERATURE</b>
<b>I.</b>	Title: Bones and joints of the trunk Short Course description: Class organization, anatomical terminology, introduction to osteology, types of joints. Vertebral column, ribs, sternum. Literature: required and optional
<b>II.</b>	Title: Bones and joints of the shoulder girdle and upper limb Short description: Biomechanics and clinical significance of structure of the bones and joints of the shoulder girdle and upper limb.

	Literature: required and optional
<b>III.</b>	Title: Bones and joints of the upper limb - forearm and hand
	Short description: Biomechanics and clinical significance of bones and joints of the forearm and hand. Elbow joint and joints of the hand.
	Literature: required and optional
<b>IV.</b>	Title: Bones and joints of the lower limb - Pelvis and hip joint
	Short description: Upright posture. Biomechanics and clinical significance of bones and joints of the pelvis and the lower limb. Pelvis and hip joint. Bones and joints of the pelvis and thigh.
	Literature: required and optional
<b>V.</b>	Title: Bones and joints of the lower limb - knee and foot
	Short description: Clinical significance of bones and joints of the leg and foot. Knee joint. Bones and joints of the leg and foot.
	Literature: required and optional
<b>VI.</b>	Title: Neurocranium (braincase)
	Short description: Neurocranium - evolutionary characteristics and clinical significance. Bones of the braincase, base of the skull, apertures and canals of base of the skull.
	Literature: required and optional
<b>VII.</b>	Title:Viscerocranium (facial bones)
	Short description: Viscerocranium-evolutionary characteristics and clinical significance.Radiographic anatomy of the skeleton.Facial bones, apertures and topographically significant facial features.
	Literature: required and optional
<b>VIII.</b>	Title: Muscles of the head and neck
	Short description: Introduction to myology, shape, parts and insertions of the muscles. Facial muscles, mimicry. Muscles of the head and neck.
	Literature: required and optional
<b>IX.</b>	Title: Muscles of the thorax and the back
	Short description: Clinical significance of morphology and shape of muscles of the thorax and the back. Special structure of muscles of the thorax and the back.
	Literature: required and optional
<b>X.</b>	Title: Muscles of the upper limb (2 days)
	Short description: Clinical significance of morphology and shape of muscles of the shoulder and the arm. Muscles of the upper limb. Demonstrational dissection of muscles of the upper limb.
	Literature: required and optional
<b>XI.</b>	Title:Muscles of the pelvis and thigh.
	Short description: Clinical significance of morphology and shape of muscles of pelvis and thigh, upright posture and gait. External and internal muscles of the pelvis. Demonstrational dissection of muscles of pelvis and thigh.
	Literature: required and optional

<b>XII.</b>	Title: Muscles of the leg and foot
	Short description: Clinical significance of morphology and shape of muscles of the leg and foot. Demonstrational dissection of muscles of lower leg and foot.
	Literature: required and optional
<b>XIII.</b>	Title: Heart and pulmonary blood flow
	Short description: Heart morphology, pulmonary blood flow, clinical significance of structure of arteries and veins. Fetal blood flow and its repercussion on the structure and function of the cardiovascular system in adults. Heart section.
	Literature: required and optional
<b>XIV.</b>	Title: Circulatory system
	Short description: Circulatory system, aorta, superior and inferior vena cava, lymphatic system. Clinical methods of visualization of the blood vessels. Demonstration on the preparations - blood vessels of the extremities.
	Literature: required and optional
<b>XV.</b>	Title: The fundamental classification of the nervous system and the spinal cord.
	Short description: Organization of the nervous system and clinical significance of the spinal cord, vascularization and neural pathways, reflex arc. Autonomic and somatic nervous system. Spinal cord and spinal nerves.
	Literature: required and optional
<b>XVI.</b>	Title: Brain stem and cerebellum
	Short description: Basic structure of the brain stem and cerebellum. Fourth ventricle. Brain stem and cerebellum section.
	Literature: required and optional
<b>XVII.</b>	Title: Midbrain, diencephalon and cranial nerves
	Short description: Basic structure of the midbrain, diencephalon and cranial nerves. Midbrain and diencephalon section, cranial nerve output.
	Literature: required and optional
<b>XVIII.</b>	Title: Telencephalon
	Short description: basic structure of the telencephalon. Brain cortex centers, ventricular system. Lymbic system. Telencephalon section.
	Literature: required and optional
<b>XIX.</b>	Title: Blood vessels of the brain and spinal cord, cross sections of the brain
	Short description: Blood vessels of the brain, meninges of the brain, dural venous sinuses, frontal and horizontal sections of the brain. Special characteristics of the circulation within the central nervous system.
	Literature: required and optional
<b>XX.</b>	Title: Trigonum caroticum

	Short description: N. vagus, truncus sympathicus, n. accessorius. Topographic anatomy (tr. caroticum, a. carotis communis, v. jugularis int.)
	Literature: required and optional
<b>XXI.</b>	Title: Regio colli lateralis
	Short description: A. et v. subclavia, plexus cervicalis, plexus brachialis. Topographic anatomy of the lateral neck area.
	Literature: required and optional
<b>XXII.</b>	Title: Orbit (all about eye)
	Short description: Regio palpebralis. Inervation and vascularization of the orbit. Orbit and its structures, bulbus oculi.
	Literature: required and optional
<b>XXIII.</b>	Title: Temporal bone (all about ear)
	Short description: Temporal bone and tympanic cavity. Topography of the middle and inner ear.
	Literature: required and optional
<b>XXIV.</b>	Title: Regio parotidomasseterica and temporomandibular joint
	Short description: Regio parotidomasseterica, salivary glands, temporomandibular joint, regio faciei anterior. N. facialis, n. tympanicus, ganglion oticum, retromandibular fossa. Muscles of mastication, anatomical backround of mastication, infratemporal fossa.
	Literature: required and optional
<b>XXV.</b>	Title: Oral cavity
	Short description: N. hypoglossus, n. glossopharyngeus, ganglion submandibulare. Teeth, tongue, muscles of the oral cavity, n. mandibularis, hard and soft palate.
	Literature: required and optional
<b>XXVI.</b>	Title: Pharynx (throat)
	Short description: Pharynx and the parapharyngeal space. Clinical significance of the pharyngeal structures. N. vagus, n. glossopharyngeus, isthmus of the pharynx, lymphatic tissue of the pharynx.
	Literature: required and optional
<b>XXVII.</b>	Title: Nose and the paranasal sinuses
	Short description: Nose and the paranasal sinuses, regio faciei anterior. Ganglion pterygopalatinum, n. maxillaris, inervation and vascularization of the nose and paranasal sinuses. Topography of the nose and nasal cavity.
	Literature: required and optional
<b>XXVIII.</b>	Title: Topographic anatomy of the abdominal cavity (upper part)
	Short description: Regiones abdominis, Topographic anatomy of the esophagus, stomach and small intestine. Clinical significance of structure of the esophagus, stomach and small intestine. Esophagus, stomach and small intestine, relations to other abdominal structures.

	Literature: required and optional
<b>XXXIX.</b>	Title: Topographic anatomy of the abdominal cavity II (lower part)
	Short description: Topographic anatomy of the large intestine, liver, pancreas and spleen. Development of the peritoneum. Organ projection on the abdominal wall.
	Literature: required and optional
<b>XXX.</b>	Title: Topographic anatomy of the retroperitoneum
	Short description: Kidney, renal fascia, ureter, urinary bladder. Inguinal canal. Topographic anatomy of the retroperitoneum.
	Literature: required and optional
<b>XXXI.</b>	Title: Topographic anatomy of the upper limb I
	Short description: Topographic anatomy of the shoulder and the upper arm. Clinical significance of topography of the shoulder and the upper arm. Axilla, upper arm and cubital fossa.
	Literature: required and optional
<b>XXXII.</b>	Title: Topographic anatomy of the upper limb II
	Short description: Topographic anatomy of the forearm and hand. Clinical significance of topography of the forearm and hand. Forearm and hand.
	Literature: required and optional
<b>XXXIII.</b>	Title: Larynx, trachea and bronchi
	Short description: Larynx, trachea, bronchi, (regio pectoralis, mamma). Clinical significance of the structures of larynx for phonation, crossing of the digestive and respiratory tracts. Fossa jugularis, regio colli mediana (laryngea, thyroidea, trachealis).
	Literature: required and optional
<b>XXXIV.</b>	Title: Lungs and mediastinum
	Short description: Topographic anatomy of the lungs and organ projections on the chest wall. Clinical significance of the anatomy of lungs and topographic relations within the chest cavity. Lungs and pleura, mediastinum.
	Literature: required and optional
<b>XXXV.</b>	Title: Topographic anatomy of the lesser male pelvis
	Short description: Topographic anatomy of the lesser male pelvis. Clinical significance of the topography of male reproductive organs - hernias of the inguinal region. Scrotum, testicle and funiculus spermaticus, inguinal canal.
	Literature: required and optional
<b>XXXVI.</b>	Title: Topographic anatomy of the lesser female pelvis
	Short description: Topographic anatomy of the lesser female pelvis. Clinical significance of the topography of female sex organs. Position of the uterus, ligaments of the uterus, position of the ovaries and the pelvic diaphragm.
	Literature: required and optional



<b>XXXVII.</b>	Title: Topographic anatomy of the lower limb I
	Short description: Topographic anatomy of the gluteal region and thigh. Clinical significance of the topographic relations within the femoral triangle and adductor canal. Gluteal region and thigh.
	Literature: required and optional
<b>XXXVIII.</b>	Title: Topographic anatomy of the lower limb II
	Short description: Topographic anatomy of the leg and foot. Clinical significance of the topographic relations within the popliteal fossa. Leg and foot.
	Literature: required and optional