

Study programme	MEDICAL STUDIES IN ENGLISH				
Cycle	INTEGRATED	Type	UNIVERSITY		
Study track	-	Module	-		
Year of study	1	Semester	II		
Course title	ANATOMY	Course code	MFMSE203		
ECTS	21	Status	OBLIGATORY		
Teaching hours		Lectures	Exercises	Seminars	Practice
		60	90	65	0
Teachers	dr.sc. Katarina Vukojević, prof.	8	2	8	0
	dr. sc. Dragica Bobinac, prof	6	0	8	0
	dr. sc. Ana Marušić, prof	0	0	5	0
	dr. sc. Ivica Grković, prof	6	0	5	0
	dr. sc. Josip Mišković, izv. prof.	8	8	8	0
	dr. sc. Marko Ostojić, izv. prof	4	2	4	0
	dr. sc. Natalija Filipović, izv. prof.	2	2	3	0
	dr. sc. Pejana Rastović, doc.	6	5	8	0
	dr. sc. Josip Lesko, doc.	6	5	8	0
	dr. sc. Josip Novaković, doc.	8	6	6	0
	dr. sc. Ana Čarić, doc	2	0	2	0
	dr. sc. Benjamin Benzon	4	0	4	0
	dr. sc. Azer Rizikalo, viši ass.	0	20	0	0
Mirko Maglica, ass.	0	20	0	0	
Ilija Perutina, ass.	0	20	0	0	
Course objectives	<p>Course objectives are:</p> <p>To enable students to understand the structure of the human body.</p> <p>To enable students to acquire knowledge about the structure of the human body through systematic and topographic anatomy and thus enable them to understand the normal and pathological morphology of man, the relationship between surface forms and deeper structures and the relationship of these structures as a framework for life processes.</p> <p>Clinical importance of individual regions and coping in spatial orientation within the human body.</p> <p>Master in detail the systematic, functional and topographic anatomy of all regions, as well as the functional anatomy of the locomotor system, cardiovascular, respiratory, digestive, urinary and sexual systems and peripheral nervous system, including the basics of organization of major motor and sensory systems.</p> <p>Systemic anatomy: features of organs, their blood supply and innervation. According to this approach, organs are grouped according to a common function. The emphasis is on general anatomical principles important for understanding the structure and function of the human body.</p> <p>Topographic anatomy: characteristics of organs with regard to their location and interrelationship with surrounding structures (position in the body). All organs belong to a body system and a specific anatomical region.</p>				
Course learning outcomes	Learning outcome (LO) Student:		Course learning outcome code	LO code at the study program level	
	Explains the concepts of anatomical terminology		IU-MFMSE203-1	IU-MSE2 IU-MSE21	
	Describes the similarities and distinguishes the peculiarities of the individual organs structures of each of the basic structural groups: a) somatic structures (skin, fascia, bones, joints, muscles...), b) visceral structures (solid and hollow organs), c) supply and control structures (vascular and nervous systems)		IU-MFMSE203-2	IU-MSE2	
	Describes the human body division into regions (separated by "anatomic borders"), describes the content of regions and assembles anatomical structures (tissues and organs), with regard to common functional features, in (organic) systems		IU-MFMSE203-3	IU-MSE2	

	Applies basic knowledge of anatomy to concrete clinical situations	IU-MFMSE203-4	IU-MSE1 IU-MSE8
	Shows projections of clinically relevant anatomical structures on normal, living body and connects the peculiarities of structure with function of individual anatomical structures (for important movements, activities, reflexes...)	IU-MFMSE203-5	IU-MSE1
	Compares anatomical sections of anatomical structures with different radiological methods	IU-MFMSE203-6	IU-MSE2 IU-MSE8
	Describes anatomical structures on body sections in various body heights and directions	IU-MFMSE203-7	IU-MSE1
	Explains and names parts of isolated and/or dissected organs of the body.	IU-MFMSE203-8	IU-MSE1
Prerequisites for the course enrolment	In accordance with the Rulebook on the Integrated Studies at the School of Medicine University of Mostar.		
Course content	Week / shift	Topic	
	I.	UNIT 1: BONES AND JOINTS OF THE TRUNK Lecture 1: Introduction to anatomy, principles of osteology and syndesmology Seminar 1: Vertebral column, ribs and sternum Exercise 1: Bones and joints of the trunk	
	II.	UNIT 2: BONES AND JOINTS OF THE UPPER LIMB – PECTORAL REGION AND SHOULDER GIRDLE Seminar 2: Bones of shoulder girdle and shoulder joints Exercise 2: Bones of shoulder girdle and shoulder joints and arm	
	III.	UNIT 3: RADIOLOGICAL ANATOMY Lecture 2: Principles of radiological anatomy Exercise 3: Orientation points on the body. Radiological anatomy of axial skeleton and shoulder regions	
	IV.	UNIT 4: BONES AND JOINTS OF THE UPPER LIMB – FOREARM AND HAND Seminar 3: Bones and joints of the forearm and hand Exercise 4: Bones and joints of the forearm and hand	
	V.	UNIT 5: BONES AND JOINTS OF THE LOWER LIMB – PELVIC GIRDLE, HIP & THIGH Seminar 4: Bones and joints of the hip and thigh Exercise 5: Bones and joints of the hip and thigh	
	VI.	UNIT 6: BONES AND JOINTS OF THE LOWER LIMB – LEG AND FOOT Seminar 5: Bones and joints of the leg and foot Exercise 6: Bones and joints of the leg and foot	
	VII.	UNIT 7: NEUROCRANIUM Lecture 3: Cranial bones and aspects of cranium Seminar 6: Orientation points on the cranium. Neurocranial bones and aspects of neurocranium Exercise 7: Neurocranial bones	
	VIII.	UNIT 8: VISCEROCRANIUM Seminar 7: Viscerocranium Exercise 8: Viscerocranial bones and aspects of viscerocranium	
	IX.	UNIT 9: PRINCIPLES OF ORGANIZATION OF THE CENTRAL NERVOUS SYSTEM Lecture 4: Organization of the central nervous system Seminar 8: Cerebrum and cerebellum Exercise 9: Sectional anatomy of the central nervous system	
	X.	UNIT 10: SPINAL CORD AND SPINAL NERVES Lecture 5: Spinal cord and spinal nerves Seminar 9: Somatic and autonomic nervous systems Exercise 10: Spinal nerves and somatic plexuses, structure and organisation	
XI.	UNIT 11: BASIS OF THE BRAIN AND CRANIAL NERVES Lecture 6: Brainstem and cranial nerves Seminar 10: Organisation of cranial nerves		

	Exercise 11: Cranial nerve exits at brain basis and cranium, cranial nerve nucleus structure. Organisation of brain stem nuclei
XII.	UNIT 12: VENTRICULAR SYSTEM AND BLOOD VESSELS OF THE BRAIN Lecture 7: Blood vessels of the brain, spinal cord and CSF Seminar 11: Blood brain circulation in the central nervous system Exercise 12: Venous sinuses, blood vessels of the brain, spinal cord and meninges, ventricular system of CNS
XIII.	UNIT 13: PRINCIPLES OF CARDIO-VASCULAR SYSTEM AND HEART Lecture 8: Principles of cardiovascular system and heart, circulation Seminar 12: Heart Exercise 13: Heart and blood vessels and circulation
XIV.	UNIT 14: PRINCIPLES OF VISCERAL SYSTEMS Lecture 9: Principles of the organization of visceral organs Exercise 14: Position and structure of visceral organs
XV.	UNIT 15: REGIO PAROTIDEOMASSETERICA ET REGIO BUCCALIS Lecture 10: Regio parotideomassesterica et buccalis Seminar 13: Regio parotideomassesterica et buccalis Exercise 15: Regio parotideomassesterica et regio buccalis – section
XVI.	UNIT 16: EPICRANIUM ET REGIO TEMPORALIS Lecture 11: Epicranium et regio temporalis Seminar 14: Auris Exercise 16: Regio temporalis et auricularis – section
XVII.	UNIT 17: REGIO ORBITALIS Lecture 12: Regio orbitalis Seminar 15: Orbita et oculus Exercise 17: Regio orbitalis – section
XVIII.	UNIT 18: REGIO NASALIS, FOSSA INFRATEMPORALIS ET PTERYGOPALATINA Lecture 13: Regio nasalis Seminar 16: Nose and paranasal sinuses. Fossa infratemporalis et pterygopalatina Exercise 18: Facies, fossa pterygopalatina et fossa infratemporalis- section
XIX.	UNIT 19: REGIO ORALIS ET MENTALIS. TRIGONUM SUBMANDIBULARE Lecture 14: Cavum oris et trigonum submandibulare Seminar 17: Oral cavity Exercise 19: Trigonum submandibulare – section
XX.	UNIT 20: TRIGONUM CAROTICUM Lecture 15: Trigonum caroticum Seminar 18: Pharynx Exercise 20: Trigonum caroticum et pharynx – section
XXI.	Lecture 16: Trigonum musculare Seminar 19: Larynx Exercise 21: Trigonum musculare et fossa jugularis – section
XXII.	UNIT 22: REGIO CERVICALIS LATERALIS Lecture 17: Regio cervicalis lateralis Seminar 20: Regio cervicalis lateralis Exercise 22: Regio cervicalis lateralis – section
XXIII.	UNIT 23: REGIO PECTORALIS ET FOSSA AXILLARIS Lecture 18: Regio pectoralis et fossa axillaris Seminar 21: Muscles of shoulder girdl and axilla Exercise 23: section of axilla
XXIV.	UNIT 24: TOPOGRAPHIC ANATOMY OF ARM Lecture 19: Topographic anatomy of arm Seminar 22: Muscles of arm and elbow region Exercise 24: Section of arm and elbow region
XXV.	UNIT 25: TOPOGRAPHIC ANATOMY OF FOREARM AND HAND Lecture 20: Topographic anatomy of forearm and hand Seminar 23: Muscles of forearm and hand and carpal tunnel Exercise 25: Section of forearm and hand

	XXVI.	UNIT 26: TOPOGRAPHIC ANATOMY OF THORACIC CAVITY Lecture 21: Mediastinum Seminar 24: Lungs and bronchi Exercise 26: Section of thoracic region					
	XXVII.	UNIT 27: ABDOMINAL WALL AND INGUINAL CANAL Lecture 22: Abdominal wall and inguinal channel Seminar 25: Projections of abdominal organs on the abdominal wall Exercise 27: Anatomical section and demonstration					
	XXVIII.	UNIT 28: PERITONEUM AND MESENTERY Lecture 23: Peritoneum and mesentery Seminar 26: Spaces in the abdominal cavity Exercise 28: Anatomical section and demonstration					
	XXIX.	UNIT 29: TOPOGRAPHIC ANATOMY OF ABDOMINAL CAVITY Lecture 24: Topographic anatomy of the stomach, duodenum, small and large intestine Seminar 27: Abdominal organs Exercise 29: Section of stomach, duodenum, small and large intestine					
	XXX.	UNIT 30: TOPOGRAPHIC ANATOMY OF BACK Lecture 25: Topographic anatomy of back Seminar 28: Back muscles Exercise 30: Section of back muscles					
	XXXI.	UNIT 31: TOPOGRAPHIC ANATOMY OF RETROPERITONAL ORGANS Lecture 26: Topographic anatomy of retroperitoneum Seminar 29: Kidneys and ureters Exercise 31: Section of retroperitoneum					
	XXXII.	UNIT 32: TOPOGRAPHIC ANATOMY OF FEMALE PELVIS Lecture 27: Topographic anatomy of female pelvis Seminar 30: Female reproductive organs Exercise 32: Anatomical section and demonstration					
	XXXIII.	UNIT 33: TOPOGRAPHIC ANATOMY OF MALE PELVIS Lecture 28: Topographic anatomy of male pelvis Seminar 31: Male reproductive organs Exercise 33: Anatomical section and demonstration					
	XXXIV.	UNIT 34: TOPOGRAPHIC ANATOMY OF PELVIC GIRDLE AND THIGH Lecture 29: Topographic anatomy of pelvic girdle and thigh Seminar 32: Muscles of pelvic girdle and thigh Exercise 34: Anatomical section and demonstration					
	XXXV.	UNIT 35: TOPOGRAPHIC ANATOMY OF LEG AND FOOT Lecture 30: Topographic anatomy of leg and foot Seminar 33: Muscles of leg and foot Exercise 35: Anatomical section and demonstration					
	XXXVI.	Exercise 36: Anatomical section and demonstration: head and neck					
	XXXVII.	Exercise 37: Anatomical section and demonstration: upper and lower limbs					
	XXXVIII.	Exercise 38: Anatomical section and demonstration: trunk					
Language	English						
E-learning	Classes are taken in person. If necessary, teaching can take place online via e-learning platforms (Google Meet) in accordance with the Rulebook, up to a maximum 20%.						
Teaching methods	Lectures, interactive and active-experiential.						
Types of assessment (indicate - Bold)							
Type of pre-examination obligation					Type of exam		
midterm	seminar paper	essay/report	practical/project task	other	written exam	oral exam	practical
Allocation of ECTS credits and share in the grade							
Student obligations		Learning outcome code	Hours of workload	Share in ECTS	Share in grade		
Class attendance			215	7.2			

Pre-exam/partial written exams (A1 + A2)	IU- MFMSE203-1 IU- MFMSE203-2 IU- MFMSE203-3 IU- MFMSE203-4	205	6.8	50%
Practical exam	IU- MFMSE203-5 IU- MFMSE203-7 IU- MFMSE203-8	60	2	20%
Final oral exam	IU- MFMSE203-2 IU- MFMSE203-3 IU- MFMSE203-4 IU- MFMSE203-5 IU- MFMSE203-6 IU- MFMSE203-7 IU- MFMSE203-8	150	5	30%
In total		630	21	100%

Method of calculating the final grade

The final grade is calculated based on the weight. The written exam carries 50% of the grade, the practical exam carries 20% of the grade, and the oral exam carries 30% of the grade. A detailed description is given in the additional course information.

Literature (indicate)	Title (title, author, year)	Edition		Language				Type of literature			
		own	other	croatian	english	other	multilingual	book	article	script	other
Compulsory	Gray's Anatomy for Students, 4th Edition. Authors: Richard Drake & A. Wayne Vogl & Adam W. M. Mitchell		x		x			x			
	Sobotta Atlas of Anatomy, 16th ed., English/Latin, 16th Edition. Authors: Friedrich Paulsen & Jens Waschke		x		x						atlas
Additional	Netter, F.H. Atlas of human anatomy, ICON Learning Systems. 3rd Bk&Cdr edition. Teterboro, NJ; 2003 and updated versions		x		x						atlas

Additional course information

The anatomy course contains 215 hours and is taken over 12 weeks. This includes the time for preparing partial exams, and the first exam term.

The anatomy exam consists of three parts: written, practical and oral.

Two partial written exams will be held during classes.

The first partial exam consists of 50 test-questions and the **second partial exam** consists of 100 multiple-choice test-questions. Each correct question brings one point.

Also, during the class, there will be a **continuous knowledge check**, students will take quizzes every day. Quizzes are not graded (only pass / fail is recorded), and depending on the success, the student can get up to three additional points on each partial exam, which are added together with the correct answers.

Based on the total number of points (correct answers from the partial exam + additional points), partial exams are graded as follows:

The written exam is graded as follows:

less than 60% correct answers = insufficient (1)

from 60% to 70% = sufficient (2)

from 71% to 80% = good (3)

from 81% to 90% = very good (4)

from 91% to 100% = excellent (5)

Once passed, the partial exam is valid for the entire academic year and that part of the material will not have to be taken again in writing.

After passing the written part, a practical exam follows.

At the practical exam, 25 anatomical structures on the preparations will be marked. All types of preparations can be considered - human plasticized, plastic models as well as donor bodies. To pass the practical part, the student must correctly name and write at least 18 marked structures.

Less than 18 points = insufficient 1

18-19 points = sufficient 2

20-21 points = good 3

22-23 points = very good 4

24-25 points = excellent 5

Once passed, the practical exam is valid for the entire academic year.

After passing the practical exam, the oral part follows.

At the oral exam, the student draws 7 cards with questions that are divided into the same number of categories. The student should orally demonstrate basic knowledge from all parts of the material he has extracted in order for his answer to be considered satisfactory.

The final grade is calculated based on the weight. The written exam carries 50% of the grade, the practical exam carries 20% of the grade, and the oral exam carries 30% of the grade.

During the exam deadlines, students who have not passed some of the partial exams must first pass the written part of the exam that did not pass on the partial exams. After passing the complete written exam, the student takes the practical exam, and after passing the practical exam, he takes the oral part of the exam.