



COURSE UNIT DESCRIPTION

Course unit title	Code
Human Anatomy I, academic year 2021/2022 (Medicine)	ZMAN2115

Lecturer(s)	Department(s)
Coordinating: assoc. prof. Andrej Suchomlinov Other lecturers: prof. Janina Tutkuvienė, assoc. prof. assoc. Arūnas Barkus, prof. Eglė Marija Jakimavičienė, assoc. prof. Žydrūnė Miliauskienė, assoc. prof. Laura Nedzinskienė, assist. Miglė Leonavičiūtė-Klimantavičienė, assist. Kristina Kuolienė, j. assist. Rūta Morkūnienė, lect. Dainora Bandzevičienė, lect. Julius Janavičius	Vilnius University, Medical Faculty, Institute of Biomedical Sciences, Department of Anatomy, Histology and Anthropology, Ciurlionio str. 21/27, Vilnius

Cycle	Level of the course unit	Type of the course unit
Cycle (integrated studies)		compulsory

Mode of delivery	Period of delivery	Language of instruction
Face-to-face lectures and seminars; practical classes in dissecting room, consultations, colloquia; individual studies	I (Autumn) semester	English

Prerequisites and corequisites	
Prerequisites: None	Corequisites (if any): None

Number of ECTS credits allocated to the course unit	Total student's workload	Contact hours	Individual study hours
10	270	135	135

Purpose of the course unit: programme competences to be developed		
<p>The purpose of the course unit is to prepare students for clinical medicine studies, provide important knowledge about the human body structure, create interest and teach techniques to help at the chosen medical specialty of an individual to go into the details of human body composition. By the end of the course students must know the structure of the locomotor system, internal organ systems, central nervous system and sense organs, circulatory system and peripheral nervous system, understand their individual, clinical, age-related and sex-related features, get a generalized, integrated understanding of the whole structure of the human body, use correct anatomical terminology and know the history of anatomy in Lithuania and the world.</p>		
Learning outcomes of the course unit		
General competences – after successful completion of this semester the student will be able:	Teaching and learning methods	Assessment methods
To act with integrity and ethical obligations; to be able to think critically and	Lectures, practical classes, seminars,	Continuous assessment during practical classes in dissecting

self-critically, be creative, proactive, pay to the goal; to be able to communicate with others	consultations	room and consultations
To evaluate the limits of their powers and, if necessary, seek help; to solve problems and make decisions; to communicate and work as a team together with the teacher and peers	Lectures, practical classes, seminars, consultations	Continuous assessment during practical classes in dissecting room and consultations
To analyse and synthesize; to be able to apply knowledge in practice	Lectures, practical classes, seminars, consultations	Continuous assessment during practical classes in dissecting room, consultations and intermediate colloquia
Subject-specific competences – after successful completion of this semester the student will:	Teaching and learning methods	Assessment methods
Have good knowledge of normal anatomy of the human skeleton, the most common skeletal variations and sex- or age-related characteristics	Lectures, practical classes, seminars, consultations, individual studies	Intermediate first colloquium; a written exam at the end of the subject studies
Have good knowledge of normal anatomy of the human joints, basic knowledge of biomechanics	Lectures, practical classes, seminars, consultations, individual studies	Intermediate first colloquium; a written exam at the end of the subject studies
Have good knowledge of normal anatomy of the human muscle system, basic knowledge of biomechanics	Lectures, practical classes, seminars, consultations, individual studies	Intermediate first colloquium; a written exam at the end of the subject studies
Have good knowledge of normal anatomy of the human alimentary and respiratory systems, the most common variations, sex and age-related characteristics	Lectures, practical classes, seminars, consultations, individual studies	Intermediate second colloquium; a written exam at the end of the subject studies
Have good knowledge of normal anatomy of the human urogenital system, the most common variations, sex and age-related characteristics	Lectures, practical classes, seminars, consultations, individual studies	Intermediate second colloquium; a written exam at the end of the subject studies
Have good knowledge of normal anatomy of the human central nervous system	Lectures, practical classes, seminars, consultations, individual studies	Intermediate third colloquium; a written exam at the end of the subject studies
Have good knowledge of normal anatomy of the human sense organs	Lectures, practical classes, seminars, consultations, individual studies	Intermediate third colloquium; a written exam at the end of the subject studies
Be able to use correct anatomical terminology (in English and Latin), know the history of anatomical science	Lectures, practical classes, seminars, consultations, individual studies	Continuous assessment during practical classes and consultations; a written exam at the end of the subject studies

Topics	Contact work hours						Time and tasks of individual studies		
	Lectures	Consultations	Seminars	Practical classes	Laboratory work	Practical training	Total contact hours	Individual studies	Tasks
1. Introduction to human anatomy (anatomical science and its history; anatomical nomenclature; axes and planes of the human body; methods of investigation of a live human and a cadaver).	2						2	2	Studies of the literature, preparing for seminars and practical classes.
2. General osteology: structure and classification of bones. Ontogenesis of skeleton. Sex and age-related characteristics of the skeleton.	4		2				6	6	Studies of the literature, preparing for seminars and practical classes.
3. Structure of the axial skeleton (1): bones of the trunk: vertebrae and vertebral column, ribs, sternum, thorax.	2		2	4			8	8	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
4. Structure of the axial skeleton (2): skull: bones of neurocranium and face.	2		4	4			10	10	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
5. Bones of the upper and lower limbs (including shoulder and pelvic girdles).	2			4			6	6	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
6. General arthrology. Classification of joints. Fibrous, cartilaginous and bony joints. Structure, classification and biomechanics of the joints.	2		2				4	4	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
7. Joints of the trunk and the skull.	2		1	1			4	4	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
8. Joints of the upper and lower limbs and their biomechanics.	2		2	2			6	6	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
9. General myology: structure of the muscles, auxiliary apparatus of muscles, their classification, types, biomechanics and ontogenesis of the muscles.	2		2				4	4	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
10. Muscles of the head, neck, back, thorax, abdomen and lower limb, their structure, functions and topography.	4		5	5			14	14	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
11. Anatomy of alimentary system	4		6	6			16	16	Studies of the literature, preparing for seminars,

									practical classes and intermediate colloquia.
12. Anatomy of respiratory system	2		2	2			6	6	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
13. Anatomy of urinary system	2		2	2			6	6	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
14. Anatomy of reproductive system	4		2	2			8	8	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
15. Anatomy of central nervous system	10	1	8	10			29	29	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia, preparation of questions for the consultation.
16. Sense organs	2		2	2			6	6	Studies of the literature, preparing for seminars, practical classes and intermediate colloquia.
In total:	48	1	42	44	0	0	135	135	

Assessment strategy	Weight (%)	Assessment period	Assessment criteria
Continuous assessment during practical classes and seminars		During the semester	Attendance of practical classes and seminars is mandatory: missing classes due to justified causes must not exceed more than 20% of the scheduled time. Short quizzes and discussions during practical classes and seminars on the topics covered in the study plan (orally or in written form) are organized and evaluated “passed” or “failed”. If a student fails a quiz during practical classes or seminars, a possibility for retake is provided. Only after passing all quizzes, the student can take colloquia of the corresponding topic.
Phased (intermediate) assessments – three colloquia must be passed: 1) Locomotor system 2) Splanchnology 3) CNS and sense organs	15	During the semester	Colloquia are organized in the VU VMA platform and evaluated using a 10-point system: colloquia grades are not rounded (the score obtained during the test is the colloquium grade); colloquium is passed, if at least 50% of all possible points are accumulated during the test. If a colloquium, given in the study plan, is failed, a student is provided with an opportunity to retake it at an allotted time: a total of two re-takes of the same colloquium are organized during the semester and another re-take is organized during the debt week (at the beginning of the next semester).
Accumulative credit		Until the first day of the exam session	A student has to fulfil attendance requirements, pass all quizzes and all colloquia, given in the semester study plan.

Author	Year of publication	Title	No or Vol.	Publisher or Internet link
Required reading:				
Friedrich Paulsen, Jens Waschke	2018, 2020	Sobotta Atlas of Human Anatomy	Vol. 1-3, 16th ed.	ELSEVIER
Standring S. (ed.)	2016	Gray's Anatomy: The anatomical basis of clinical practice	41st ed.	Churchill Livingstone
Standring S. (ed.)	2020, 2021	Gray's Anatomy: The anatomical basis of clinical practice	42nd ed.	Elsevier
Netter F.H.	2010-2022	Atlas of Human Anatomy	5-8th ed.	Elsevier
Links to the online books:				
Standring S. (ed.)	2020	Gray's Anatomy for Students	4th ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C2015000041
Standring S. (ed.)	2021	Gray's Anatomy	42nd ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C20170037291
Netter F.H.	2019	Atlas of Human Anatomy	7th ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C20140050319
Recommended reading:				
Kahle W., Leonhardt H., Platzer W., Frotscher M., Fritsch H., Kuehnel W.	2006, 2008, 2011, 2014, 2015	Color Atlas / Text of Human Anatomy.	Vol. 1-3	Thieme Medical Publishers Inc.
A.M. Gilroy, B.R. MacPherson (eds.)	2016	Atlas of anatomy	3rd ed.	Thieme Medical Publishers Inc.
A.M. Gilroy, B.R. MacPherson, J.C. Wikenheiser (eds.)	2020	Atlas of anatomy	4th ed.	Thieme Medical Publishers Inc.
References to the online publications available at VU MF: https://www.clinicalkey.com#!/browse/books/%7B%22query%22:%22anatomy%22%7D				
Links to the recommended online books:				
Netter F.H.	2019	Atlas of Human Anatomy.	7th ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C20140050319
Friedrich Paulsen, Jens Waschke	2018	Sobotta Atlas of Human Anatomy	Vol. 1, 16th ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C20170020037
Friedrich Paulsen, Jens Waschke	2018	Sobotta Atlas of Human Anatomy	Vol. 2, 16th ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C20170020062
Friedrich Paulsen, Jens Waschke	2018	Sobotta Atlas of Human Anatomy	Vol. 3, 16th ed.	https://www.clinicalkey.com#!/browse/book/3-s2.0-C2018001779X



COURSE UNIT DESCRIPTION

Course unit title	Code
Human Anatomy II , academic year 2021/2022 (Medicine)	ZMAN2215

Lecturer(s)	Department(s)
Coordinating: prof. Janina Tutkuviėnė Other lecturers: assoc. prof. Arūnas Barkus, assoc. prof. Eglė Marija Jakimavičienė, assoc. prof. Žydrūnė Miliauskienė, assoc. prof. Andrej Suchomlinov, assoc. prof. Laura Nedzinskienė, j. assist. Rūta Morkūnienė, assist. Kristina Kuolienė, lect. Dainora Bandzevičienė	Vilnius University, Medical Faculty, Institute of Biomedical Sciences, Department of Anatomy, Histology and Anthropology, Ciurlionio str. 21/27, Vilnius

Cycle	Level of the course unit	Type of the course unit
Cycle (integrated studies)		compulsory

Mode of delivery	Period of delivery	Language of instruction
Face-to-face lectures and seminars; practical classes in dissecting room, consultations, colloquia; individual studies	II (Spring) semester	English

Prerequisites and co-requisites	
Prerequisites: Credit of the first semester	Corequisites (if any): None

Number of ECTS credits allocated to the course unit	Total student's workload	Contact hours	Individual study hours
5	134	67	67

Purpose of the course unit: programme competences to be developed		
The purpose of the course unit is to prepare students for clinical medicine studies, provide important knowledge about the human body structure, create interest and teach techniques to help at the chosen medical specialty of an individual to go into the details of human body composition. By the end of the course students must know the structure of the locomotor system, internal organ systems, central nervous system and sense organs, circulatory system and peripheral nervous system, understand their individual, clinical, age-related and sex-related features, get a generalized, integrated understanding of the whole structure of the human body, use correct anatomical terminology and know the history of anatomy in Lithuania and the world.		
Learning outcomes of the course unit		
General competences – after successful completion of this semester the student will be able:	Teaching and learning methods	Assessment methods
To act with integrity and ethical obligations; to be able to think critically and self-critically, be creative, proactive, pay to the goal; to be able to communicate with others	Lectures, practical classes, seminars, consultations	Continuous assessment during practical classes in dissecting room and consultations
To evaluate the limits of their powers and, if necessary, seek help; to solve problems and make	Practical classes, seminars, consultations	Continuous assessment during practical classes in

decisions; to communicate and work as a team together with the teacher and peers		dissecting room and consultations
To analyze and synthesize; to be able to apply knowledge in practice	Practical classes, seminars, consultations	Continuous assessment during practical classes in dissecting room, consultations and intermediate colloquia
Subject-specific competences – after successful completion of this semester the student will:	Teaching and learning methods	Assessment methods
Have good knowledge of the human circulatory system, its normal anatomy, the most common variations, age-related characteristics	Lectures, practical classes, seminars, consultations, individual studies	Intermediate colloquia; a written exam at the end of the subject studies
Have good knowledge of the human peripheral nervous system, its normal anatomy, basic symptoms of peripheral nerve damage	Lectures, practical classes, seminars, consultations, individual studies	Intermediate colloquia; a written exam at the end of the subject studies
Be able to use correct anatomical terminology (in English and Latin)	Lectures, practical classes, seminars, consultations, individual studies	Continuous assessment during practical classes and intermediate colloquia; a written exam at the end of the subject studies

Topics	Contact work hours							Time and tasks of individual studies	
	Lectures	Consultations	Seminars	Practical classes	Laboratory work	Practical training	Total contact hours	Individual studies	Tasks
1. Circulatory system: introduction, structure elements, ontogenesis. Heart.			2	2			4	4	Studies of the literature, preparing for seminars and intermediate colloquia
2. Blood vessels of the trunk. Foetal circulation and its changes after birth. Lymphatic system.	4		4	3			11	11	Studies of the literature, preparing for seminars and intermediate colloquia
3. Autonomic (visceral) nervous system.	2						2	2	Studies of the literature, preparing for seminars and intermediate colloquia
4. Endocrine system.	2		1				3	3	Studies of the literature, preparing for seminars and intermediate colloquia
5. Blood vessels of head and neck.	4		3	3			10	10	Studies of the literature, preparing for seminars and intermediate colloquia
6. Blood vessels of the limbs.	6		3	3			12	12	Studies of the literature, preparing for seminars and intermediate colloquia
7. Overview of the peripheral nervous system. Spinal nerves, plexuses and peripheral nerves	10		2	2			14	14	Studies of the literature, preparing for seminars and intermediate colloquia
8. Cranial nerves.	4	1	2	4			11	11	Studies of the literature,

										preparing for seminars and intermediate colloquia, preparation of questions for the consultation.
In total:	32	1	17	17	0	0	67	67		

Assessment strategy	Weight (%)	Assessment period	Assessment criteria
Continuous assessment during lectures, practical classes and seminars		During the semester	Attendance of practical classes and seminars is mandatory: missing classes due to justified causes must not exceed more than 20% of the scheduled time. Discussions during practical classes or seminars on the topics covered in the study plan, material presented during lectures and literature for individual studies, as well as obligatory schemes and drawings are discussed.
Phased (intermediate) assessment – three colloquia must be passed: 1) Trunk region 2) Head and neck region 3) Limbs' region	15	During the semester	Colloquia are evaluated using a 10-point system and are kept in the VU VMA environment: colloquia grades are not rounded (the score obtained during the test is the colloquium grade); colloquium is passed, if at least 50% of all possible points are accumulated during the test. If a colloquium, given in the study plan, is failed, a student is provided with an opportunity to retake it at an allotted time: a total of two re-takes of the same colloquium are organized during the semester and another re-take is organized during the debt week (at the beginning of the next semester).
Final exam (in written form)	70	During the session	Only students, who have passed all colloquia, given in the study plan, can take the final exam. Exam test is taken in VU VMA platform. The final exam test makes 70% of the final grade. The remaining 30% are the average score of all colloquia from the two semesters. <u>The final grade is written according to the following scheme:</u> 10 – total score \geq 90% 9 – total score \geq 85% 8 – total score \geq 75% 7 – total score \geq 65% 6 – total score \geq 55% 5 – total score \geq 50% 4 – total score < 50% (fail)

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Required reading:				
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S.Standring (ed.)	2016	Gray's Anatomy: The anatomical basis of clinical practice	41st ed.	Churchill Livingstone

S.Standring (ed.)	2020, 2021	Gray's Anatomy: The anatomical basis of clinical practice	42nd ed.	Elsevier
Netter F.H.	2010-2022	Atlas of Human Anatomy	5-8th ed.	Elsevier
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S.Standring (ed.)	2020	Gray's Anatomy for Students	4th ed.	https://www.clinicalkey.com/#!/browse/book/3-s2.0-C2015000041
S.Standring (ed.)	2021	Gray's Anatomy	42nd ed.	https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20170037291
Netter F.H.	2019	Atlas of Human Anatomy	7th ed.	https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20140050319
Recommended reading:				
Kahle W., Leonhardt H., Platzer W., Frotscher M., Fritsch H., Kuehnel W.	2006, 2008 2011 2014 2015	Color Atlas / Text of Human Anatomy.	Vol. 1-3	Thieme Medical Publishers Inc.
A.M. Gilroy, B.R. MacPherson (eds.)	2016	Atlas of anatomy	3rd ed.	Thieme Medical Publishers Inc.
A.M. Gilroy, B.R. MacPherson, J.C. Wikenheiser (eds.)	2020	Atlas of anatomy	4th ed.	Thieme Medical Publishers Inc.
References to online publications available at VU MF: https://www.clinicalkey.com/#!/browse/books/%7B%22query%22:%22anatomy%22%7D				
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Friedrich Paulsen, Jens Waschke	2018	Sobotta Atlas of Human Anatomy	Vol. 1, 16th ed.	https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20170020037
Friedrich Paulsen, Jens Waschke	2018	Sobotta Atlas of Human Anatomy	Vol. 2, 16th ed.	https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20170020062
Friedrich Paulsen, Jens Waschke	2018	Sobotta Atlas of Human Anatomy	Vol. 3, 16th ed.	https://www.clinicalkey.com/#!/browse/book/3-s2.0-C2018001779X