

DESCRIPTION OF THE COURSE OF STUDY

Course code	0912-7LEK-B1.1-An	
Name of the course in	Polish	Anatomia
	English	Anatomy

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	medicine
1.2. Mode of study	full-time
1.3. Level of study	uniform Master's study
1.4. Profile of study*	General academic
1.5. Person preparing the course description	dr hab. n. med. Marcin Sadowski
1.6. Contact	msadowski@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Language of instruction	English
2.2. Prerequisites*	The preliminary biology and chemistry program in the field of high school matura exam at basic level

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	lectures 75 h (40+35) including 4 hours of e-learning, classes 60 h (30+30) including 26 hours of e-learning, practical classes 90 h (45+45)	
3.2. Place of classes	Courses in the teaching rooms of JKU	
3.3. Form of assessment	lecture – credit for each semester, exam (2 nd semester), classes – credit with grade of each semester, practical classes – credit with grade of each semester	
3.4. Teaching methods	Lecture – informative lecture with oral transmission of knowledge and the use of visual means Classes – conversational lecture, discussion connected with the lecture, demonstration with description, practical classes	
3.5. Bibliography	Required reading	<ol style="list-style-type: none"> 1. K.L. Moore, A.M.R. Agur, A.F. Daley. Clinically Oriented Anatomy, 7th ed. or next + ebook, Wolters Kluwer, Lippincott Williams & Wilkins, 2013. 2. Frank H. Netter. Atlas of Human Anatomy: Including Student Consult Interactive Ancillaries and Guides, Publisher: Saunders, 6th ed. or next, 2014. 3. P.W. Tank, T.R. Gest. Atlas of Anatomy, Lippincott Williams & Wilkins 2008. 4. J.H. Spodnik. Mianownictwo anatomiczne. Edra Urban & Partner, Wrocław, 2017
	Further reading	<ol style="list-style-type: none"> 1. Drake RL, Vogl AW i Mitchell AWM. Gray's Anatomy for Students. The anatomical basis of clinical practice. Publisher: Churchill Livingstone, 3rd ed. or next, 2014. 2. R. Kudak, D. Kachlik, O. Volny: Memorix Anatomy, Edra Ed., 2016.

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

4.1. Course objectives (including form of classes)

Lectures, Classes, Practical Classes

Aims

C1-W – provide students with knowledge in the scope of anatomy of the skeletal, muscular, nervous, circulatory, respiratory, digestive, genital, urinary, endocrine, sensory organs and integumentary system

C2-W – familiarize the student with the knowledge and understanding of human anatomy in topographic term

C3-U – prepare the student to make a proper assessment of individual functional systems in various clinical situations as well as suggesting the way of further proceedings

C4-U – prepare to use the knowledge of topographic anatomy of human in both diagnostic and therapeutic medical procedures

C4-K – awareness of the possibility of acquiring knowledge from different sources and seeking the help of other people

C5-K -creation of appropriate ethical attitude towards the body of the living and the dead man

4.2. Detailed syllabus (including form of classes)

Program of lectures

The history and basic concepts of anatomy. The topography of human body, directions, location, axes, planes, parts.

Integumentary system.

Topographic and functional anatomy of the locomotor system.

Topographic and functional anatomy of central and peripheral nervous system and sense organs.

Topographic and functional anatomy of all organs of the head and neck.

Topographic and functional anatomy of all organs in the thorax.

Topographic and functional anatomy of all organs in the abdomen and pelvis. Selected aspects of the anatomy in different imaging modalities.

e-learning:

- A review of a scientific article and preparing the on-line presentation with multiple choice questions for the whole group.

- An on-line access to the 3D anatomy application by Elsevier.

Program of classes

Basic description of the anatomy of human body. Axes, planes, directions and parts.

Integumentary system-the skin and its appendages. Methods of imaging of the skin as well as its appendages (USG, mammography, MR).

Bone structure

Spine: Typical structure of vertebrae. Construction of the vertebrae in the individual section of the spine.

Connection of vertebrae: joints, syndesmosis, synchondrosis. Connections of the spine with the skull.

Movements in the joints of the head. Curvature of the spine. Mechanics and function of the spine. Methods of imaging of the spine (X-ray, CT, MR). Thorax: structure and function.

Construction of the typical rib. Variability of ribs' construction. Construction of sternum. Connections within the chest. Superior and inferior thoracic aperture. Functions and mechanics of the chest. Methods of imaging of the chest wall (usg, X-ray, CT, MR).

The bones of the upper limb. The rim of the upper limb: the clavicle and the scapula. The humerus. Forearm

bones: ulna and radius. The hand: bones of the wrist, metacarpal bones, bones of the fingers. Methods of imaging of bones of the upper limb (X-ray, CT, MR). Connections of the bones of the upper limb. Joints and

syndesmosis of the upper limb's rim. Shoulder joint. Elbow joint. Connections of the forearm's bones. Hand joints. Movements in the individual joints of the upper limb. Methods of imaging diagnosis of the bones' connections of the upper limb (usg, X-ray, MR, CT).

Bones of the lower limb. The rim of the lower limb: the ilium, ischium, and pubis. The sacrum. The femur.

The leg bones: tibia, fibula. Foot bones, tarsal bones, metatarsal, bones of toes. Methods of imaging of bones of the lower limb (X-ray, CT, MR).

Connections of the bones of the lower limb. The bones of the pelvis. Hip-joint. Knee-joint. Connections of the bones of the leg. Foot joints. Method of imaging diagnosis of the connections of the lower limb's bones (usg, X-ray, MR, CT). Skull.

Cranial bones. Craniofacial bones. Connections of skull bones. The base of the skull: anterior, middle and posterior. The orbit. Nasal cavity. Paranasal sinuses. Temporal fossa. Infratemporal fossa. Pterygopalatine fossa. Mandibular fossa. Methods of imaging of the skull (X-ray, CT, MR).

Test #1 – The skeletal system

Central nervous system and peripheral nervous system. Sensory organs.

Brain: cerebral hemispheres, cerebellum, brain stem. Medulla oblongata. Metencephalon – pons and cerebellum. Mesencephalon –cerebral peduncle, midbrain tectum. Diencephalon – hypothalamus and thalamus. Telencephalon – telencephalon impar and hemispheres. Division of cerebral cortex functions. Basal nuclei. Ventricular system. Cerebrospinal fluid. Cerebral meninges. Topography of the brain. Medulla spinalis – topography. Pathways (tracts) of medulla. Pathways of the spinal cord. Cranial and spinal nerves. Cervical plexus – topography, nerves, innervation area, paralysis symptoms. Brachial plexus – topography, nerves, innervation area, paralysis symptoms. Intercostal nerves – topography, innervation area, paralysis symptoms. Lumbosacral plexus – topography, nerves, innervation area, paralysis symptoms.

Sensory organs – structure and functions. The organ of smell. Optic nerve. Vestibulocochlear organ. Sense of taste. Superficial sensory receptors. Deep sensory receptors. Methods of picture diagnosis of the nervous system (usg, CT, MR).

Test #2 – The central nervous system

Topographic, functional and radiologic anatomy of all organs of the head and neck.

Test #3 – Head and neck

Resit test – 1st semester

Topographic, functional and radiologic anatomy of all organs in the thorax.

Test #4 – Thorax

Topographic, functional and radiologic anatomy of all organs of abdomen and pelvis.

Test #5 and #6 – Abdomen and pelvis

Topographic, functional and radiologic anatomy all organs of the back, and upper and lower limbs.

Test #7

Resit tests #4-7

4.3. Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of KNOWLEDGE , the graduate knows and understands:		
W01	anatomical, histological and embryological terminology	A.W1.
W02	human anatomy topographically (upper and lower limb, chest, abdomen, pelvis, back, neck and head) and functionally (respiratory system, digestive system, urogenital system, nervous system and sense organs, integumentary system)	A.W2.
W03	topographical relations between individual organs	A.W3.
within the scope of ABILITIES , the graduate knows how to:		
U01	explain the anatomical basis for clinical examination	A.U3.
U02	make conclusions as to the relationship between anatomical structures on the basis of <i>in vivo</i> diagnostic tests, in particular in the field of radiology (plain images, tests using contrast agents, CT scans and magnetic resonance imaging)	A.U4.
U03	Use anatomical, histological and embryological terminology both in written and oral communication	A.U5.
within the scope of SOCIAL COMPETENCE , the graduate is able to:		
K01	recognize his/her own limitations and self-evaluate educational deficiencies and needs;	H.S5

K02	use reliable information sources;	H.S7
K03	conclude on the basis of own surveys and observations;	H.S8
K04	introduce rules of social conduct and teamwork to the group of specialists, including specialists of other medical professions also in the multicultural and multinational environment;	H.S9
K05	give opinions concerning various aspects of professional activity;	H.S10
K06	take responsibility for own decisions made during professional activities including own safety and safety of other people;	H.S11

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes (code)	Method of assessment (+/-)																				
	Exam (three parts: written, practical and oral)			Tests			Project*			Effort in class*			Self-study*			Group work*			Others* Observation		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes					
	L	C	P/C	L	C	PC	L	C	...	L	C	P/C	L	C	..	L	C	P/C	L	C	..
W01	+	+	+	+	+	+				+	+	+							+	+	
W02	+	+	+	+	+	+				+	+	+							+	+	
W03	+	+	+	+	+	+				+	+	+							+	+	
U01	+	+	+	+	+	+				+	+	+							+	+	
U02	+	+	+	+	+	+				+	+	+							+	+	
U03	+	+	+	+	+	+				+	+	+							+	+	
K01-K06																			+	+	+

*delete as appropriate

4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
Lecture (L)	3	Student mastered knowledge and skills specified in 4.3 sufficiently – obtained 61-68% of possible points
	3,5	Student mastered knowledge and skills specified in 4.3 fairly good – obtained 69-76% of possible points
	4	Student mastered knowledge and skills specified in 4.3 good – obtained 77-84% of possible points
	4,5	Student mastered knowledge and skills specified in 4.3 more than good – obtained 85-92% of possible points
	5	Student mastered knowledge and skills specified in 4.3 very good – obtained 93-100% of possible points
Classes (C)	3	Student mastered knowledge and skills specified in 4.3 sufficiently – obtained 61-68% of possible points
	3,5	Student mastered knowledge and skills specified in 4.3 fairly good – obtained 69-76% of possible points
	4	Student mastered knowledge and skills specified in 4.3 good – obtained 77-84% of possible points

	4,5	Student mastered knowledge and skills specified in 4.3 more than good – obtained 85-92% of possible points
	5	Student mastered knowledge and skills specified in 4.3 very good – obtained 93-100% of possible points
Practical classes	3	Student mastered knowledge and skills specified in 4.3 sufficiently – obtained 61-68% of possible points
	3,5	Student mastered knowledge and skills specified in 4.3 fairly good – obtained 69-76% of possible points
	4	Student mastered knowledge and skills specified in 4.3 good – obtained 77-84% of possible points
	4,5	Student mastered knowledge and skills specified in 4.3 more than good – obtained 85-92% of possible points
	5	Student mastered knowledge and skills specified in 4.3 very good – obtained 93-100% of possible points

Thresholds are valid from 2018/ 2019 academic year

The final exam consists of three parts: practical, test, and oral.

There are full particulars related to the rules and procedures of the exam and credits in the Internal Regulation of the Anatomy Department.

5. BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT

Category	Student's workload
	Full-time studies
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/	225
<i>Participation in lectures</i>	71
<i>Participation in classes, seminars, laboratories</i>	124
<i>Preparation in the exam/ final test</i>	
Others	30 (e-learning)
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/	200
<i>Preparation for the lecture</i>	75
<i>Preparation for the classes, seminars, laboratories</i>	125
<i>Preparation for the exam/test</i>	
<i>Gathering materials for the project/Internet query</i>	
<i>Preparation of multimedia presentation</i>	
<i>Others</i>	
TOTAL NUMBER OF HOURS	425
ECTS credits for the course of study	17

Accepted for execution (date and signatures of the teachers running the course in the given academic year)

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