



Syllabus 2018/2019														
Description of the course														
Module/Course	ANATOMY										Group of detailed education results			
											Group code	Group name		
											A	morphological science		
Faculty	Medicine													
Major	medicine													
Specialties	not applicable													
Level of studies	Uniform magister studies x* 1 <sup>st</sup> degree studies <input type="checkbox"/> 2 <sup>nd</sup> degree studies <input type="checkbox"/> 3 <sup>rd</sup> degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	x full-time    x part-time													
Year of studies	first					Semester		x Winter x Summer						
Type of course	x obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / elective													
Course	<input type="checkbox"/> major X basic													
Language of instruction	<input type="checkbox"/> Polish    X English <input type="checkbox"/> other													
* mark <input type="checkbox"/> with an X														
Number of hours														
Form of education														
Unit teaching the course	Lectures (L)	Seminars (SE)	Auditorium classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Specialist Classes – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
<b>Winter Semester</b>														
Department of Human Morphology and Embryology Division of Anatomy	20						65						32,5	
<b>Summer Semester</b>														
Department of Human Morphology and Embryology Division of Anatomy	20						65						134,5	



TOTAL per year:												
Department of Human Morphology and Embryology Division of Anatomy	40						130					167
Educational objectives (max. 6 items)												
<b>C1. Teaching students the normal structure of the human body with its functional aspects.</b> <b>C2. Teaching students the regional anatomy of all parts of the human body.</b> <b>C3. Teaching students the anatomical and basis of medical terminology.</b>												
Education result matrix for module/course in relation to verification methods of the intended education result and the type of class												
Number of course education result	Number of major education result	Student who completes the module/course knows/is able to					Methods of verification of intended education results (forming and summarising)			Form of didactic class <i>**enter the abbreviation</i>		
W1	A.W1	The student knows the english anatomical terminology.					Test, oral response			L, CSC		
W2	A.W2	The student knows the human body structure in descriptive and regional approaches					Test, oral response			L, CSC		
W3	A.W3	The student knows and describes the regional relationships of the organs and systems in a cadaver as well as in a living individual					Test, oral response			L, CSC		
U1	A.U4	The student is able to identify the normal anatomical structures on the intravital images (USG, CT, MRI) in the basal degree					Oral response			L, CSC		
U2	A.U5	The student uses in written and spoken form the anatomical terminology.					Oral response			L, CSC		
<b>** L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .</b>												
Please mark on scale 1-5 how the above effects place your classes in the following categories: communication of knowledge, skills or forming attitudes: Knowledge: 5 Skills: 3												
Student's amount of work (balance of ECTS points)												
Student's workload (class participation, activity, preparation, etc.)								Student Workload (h)				
1. Contact hours:								170				
2. Student's own work (self-study):								167				
Total student's workload								337				



ECTS points for module/course	17,0
Comments	
Content of classes (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)	
<p>Lectures</p> <p>The lectures are correlated with practical classes and apart from the information about the body structure provide the basic functional and clinical aspect of teaching deals.</p> <ul style="list-style-type: none"> <li>• The first semester: <ul style="list-style-type: none"> <li>Introduction to anatomical terminology (anatomical position, anatomical orthogonal axis, anatomical planes, terms of relationship, terms of movement).(2 hours)</li> <li>Classification of bones. Classification of joints. The structure, classification and movements of synovial joints.(1 hour)</li> <li>Practical aspects of anatomy of vertebral column (vertebral canal, intervertebral foramina).</li> <li>The carpal tunnel and its contents. The joints of the hand /generally/.(2 hours)</li> <li>The pelvic girdle. Pelvic bones (structure; gender differences). Joints of the pelvic girdle (the pubic symphysis and the sacroiliac joint).(2hours)</li> <li>The skull as a whole: joints of the skull (sutures and temporomandibular joint). Craniovertebral joints. Norma superior and basalis of the skull.(1 hour)</li> <li>The exterior of the skull (temporal, infratemporal and pterygopalatine fossa). The bony landmarks of the skull.(2 hours)</li> <li>The Digestive System :salivary glands. Facial nerve – peripheral part /VII/. (2 hours)</li> <li>Tongue – structure, vasculature, sensorial and motorial innervation; the soft palate. Veins of the head and neck. (2 hours)</li> <li>The Respiratory System / paranasal sinuses/.(1 hour)</li> <li>The Respiratory System / larynx - laryngeal cartilages, ligaments, muscles, cavity; glottis/.(2 hours)</li> <li>The brachial plexus /structure, position, branches/. The course of the nerves of brachial plexus on the upper limb.(1 hour)</li> <li>Superficial and deep venous drainage of the upper limb. Surface anatomy of the upper limb.(2 hours).</li> </ul> </li> <li>• The second semester : <ul style="list-style-type: none"> <li>The inguinal canal. The femoral and obturator canals.(1 hour)</li> <li>The cutaneous innervation of the lower limb. The muscles of the foot (in general). The nerves and vessels of the foot.(1 hour)</li> <li>The azygos system of veins. The superior and inferior caval veins. The fetal circulation. The postnatal systemic circulation. (2 hours)</li> <li>The innervation and conducting system of the heart. Blood supply of the heart.(2 hours)</li> <li>The diaphragm. The peritoneum and the peritoneal cavity. The lesser sac (omental bursa).</li> <li>The big sympathetic plexuses.(2 hours)</li> <li>The perineum. The urogenital diaphragm, the perineal fascias and spaces.(2 hours)</li> <li>The olfactory nerve (CN I). The olfactory system. The limbic lobe and system. (2 hours)</li> <li>The cerebral cortex. The most important functional areas of the cerebral cortex. The pyramidal system. (2 hours)</li> <li>Arterial circle of Willis. Blood supply of the brain and spinal cord (arteries, veins and venous dural sinuses).(2 hours)</li> <li>Tracts of the CNS . The extrapyramidal motor system. The reticular formation.(2 hours)</li> <li>The autonomic nervous system.(2 hours)</li> </ul> </li> </ul>	
<p>Seminars.</p> <p>Not applicable</p>	



### Practical classes

Are performed in dissecting room with using the following methods: presenting of previously dissected material, dissection if possible, plastic models and computer teaching.

Subjects of practical classes are the following:

• In the first semester:

The individual vertebrae. General vertebral characteristics. Structure of the first and second cervical vertebra. The sacrum and coccyx. The skeletal framework of the thorax (ribs and the sternum).(3 hours)

The axial skeleton. Joints of the axial skeleton. Joints of the vertebral column and thorax. Mechanical movements of the thorax. The vertebral column (general characteristic, curvatures, movements).(2 hours)

Skeleton of the shoulder girdle - the clavicle, the scapula. Skeleton of the free upper limb. The bones of hand /generally/. Joints of the shoulder girdle - the sternoclavicular and the acromioclavicular joint. Joints of free upper limb (shoulder joint, elbow joint and wrist joint).( 3 hours)

Pelvic bones. Skeleton of the free lower limb (the femur, the patella, the tibia, the fibula). Bones of the foot - the calcaneus, the talus /in detail/.The others bones of the foot /generally/.(3 hours).

Joints of the free lower limb – the hip, the knee and the ankle joint. Joints of the foot - the midtarsal and the tarsometatarsal joints /in detail/. The joints of the foot /generally/. (3 hours)

Bones of the skull: the frontal, the sphenoid, the occipital, the parietal and the temporal bones. The canals of the temporal bone. (3 hours)

The even bones of the face: the palatine, the lacrimal, the inferior nasal concha, the zygomatic, the nasal and the maxilla (the upper jaw bone). (3 hours)

The odd bones of the face: mandible (lower jaw bone) and hyoid bone, ethmoidal bone, vomer.(3 hours)

The interior of the cranium - the anterior, middle and posterior cranial fossa. The skull as a whole: the orbital cavity, the nasal cavity. (3 hours)

The general knowledge of muscles, vessels and nerves.(3 hours)

Facial muscles – classification and innervation. Facial artery. Parotid gland and its innervation.(3 hours)

Trigeminal Nerve (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> branches). The maxillary artery. The muscles of mastication.(3 hours).

The oral vestibule and proper oral cavity. The teeth. The palatine tonsils. The muscles of the neck.

Triangles of the neck. The cervical plexus.(2 hours)

The pharynx. The nose and nasal cavity. Paranasal sinuses. The glossopharyngeal nerve /IX/.

The external carotid artery. The internal jugular vein. The accessory nerve /XI/. Hypoglossal nerve /XII/.( 3 hours)

Muscles of the thoracic wall /superficial and deep/. The subclavian artery. The brachiocephalic vein. (3 hours)

Larynx. The vagus nerve (cranial and cervical part). Thyroid and parathyroid glands.(3 hours)

The axilla. The axillary artery. The muscle of the upper limb /scapulohumeral, arm muscles/.(3 hours)

The muscle of the upper limb /arm, forearm and hand muscles/. Arterial vasculature of the upper limb.

The cubital fossa and its contents /the cubital anastomosis/.(3 hours)

The cutaneous nerves of the upper limb. The carpal tunnel /contents/. (3 hours)

Superficial back muscles. Deep back muscles /generally/.(3 hours)

The dorsal primary rami of the spinal nerves .The muscles of the gluteal region.( 3 hours)

The sacral plexus. The sciatic nerve. The common iliac artery. (3 hours)

• In the second semester:

The abdominal wall. The rectus abdominis and its sheath. The oblique and transverses abdominal muscles.(3 hours)

The muscles of the thigh. The femoral triangle. The adductor (subsartorial) canal. The lumbar plexus.

The obturator and femoral nerves. The external iliac artery. The femoral artery. The saphenous vein.(4 hours)



The popliteal fossa. The genicular anastomosis. The muscles of the leg. The anterior and posterior tibial arteries. The tibial and common fibular nerves. (3 hours)

The thoracic cavity. The thoracic aorta. The arrangement of the thoracic viscera. The mediastinum – its subdivision and contents. (3 hours)

The pleural cavity and its recesses. The esophagus. The trachea and principal and lobar bronchi. The vagus nerve (X) /thoracic part/.(3 hours)

The thoracic duct and mediastinal lymph nodes. The lungs (external and internal anatomy). The broncho-pulmonary segments. The blood vessels of the lungs.(3 hours)

The heart (external and internal anatomy). The position of the heart. The pericardial sac.(4 hours)

The abdominal region and location of abdominal viscera. The abdominal aorta and its branches. The stomach. The duodenum. The small and large intestine.(3 hours)

The liver, gallbladder and biliary ducts. The vagus nerve (X) /abdominal part/. The spleen. The pancreas.(3 hours)

The muscles of the posterior abdominal wall. The retroperitoneal space. The kidneys, ureters and urinary bladder. The female and male urethra.(3 hours)

The pelvic cavity. The female internal and external genital organs. The male internal and external genitalia. The pudendal nerve. The internal iliac artery.(3 hours)

Gross anatomy of the brain (introduction). Development of the nervous system. Meninges and cerebrospinal fluid (CSF). Divisions of the brain. The location of cranial nerves on the base of the brain. (4 hours)

The division of the cerebral hemispheres on the lobes and gyri. The presentation of the insular lobe. The cerebral commissures – the primary and secondary interhemispherical connections.(3 hours)

The white matter of the cerebral hemispheres. The basal ganglia. The internal capsule. The location of cerebral capsules. The lateral ventricles of the brain. (4 hours)

The diencephalon (the interbrain): division; internal and external structure. The third cerebral ventricle. (3 hours)

The mesencephalon ( the midbrain): division; external and internal structure. The pons – external and internal structure. The nuclei of the cranial nerves: V, VI, VII (trigeminal, abducent, facial). The fourth ventricle. (3 hours)

The medulla oblongata: internal and external structure. The nuclei of the cranial nerves: VIII, IX, X, XI, XII (vestibulocochlear, glossopharyngeal, vagus, accessory, hypoglossal).(3 hours)

The cerebellum: external and internal structure. The major cerebellar pathways.(3 hours)

The spinal cord: external and internal morphology. The meninges of the spinal cord. The repetition of the cranial nerves. (4 hours)

The eye and related structures. The auditory and vestibular apparatus.(3 hours)

Other

Not applicable

Basic literature (list according to importance, no more than 3 items)

1. Moore K. L., Dalley A.F.; Clinically Oriented Anatomy; Lippincot Williams and Wilkins; fifth edition or newest; ISBN: 0-7817-3639-0
2. Young, Paul A; Young Paul H; Basic clinical neuroanatomy; Lippincot Williams and Wilkins; latest edition; ISBN 0-683-09351-7
3. Agur, Anne M.R.; Lee, Ming J.; Grant's atlas of anatomy; Williams and Wilkins, latest edition ISBN: 0-683-03701-3

Additional literature and other materials (no more than 3 items)

1. Richard Drake; Gray's Anatomy for Students; 2005 Churchill Livingstone; ISBN 0443066124
2. James D. Fix; Neuroanatomy; Williams and Wilkins, latest edition, ISBN 0-683-03249-6
3. Any atlas of anatomy.

Didactic resources requirements (e.g. laboratory, multimedia projector, other...)

1. Human corpses and natural anatomical specimens
2. Artificial anatomical specimens
3. Multimedial anatomical presentations
4. Intravital diagnostic images of human body.

Preliminary conditions (minimum requirements to be met by the student before starting the module/course)

Basic knowledge of biological sciences.

Conditions to receive credit for the course (specify the form and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades)

**CREDIT**

Passing 4 periodical tests (two in course of each semester) on the level at least 66% possible points/ optionally oral. Attendance 100%. Knowledge of the material from the abandoned exercises and lectures orally verified on the next classes.

**EXAM**

Credit and passing the practical exam on the level at least 66% possible points. Passing the theoretical exam (test 66% / optionally oral ).

Grade:	Criteria for course
Very Good (5.0)	96-100%
Good Plus (4.5)	86-95%
Good (4.0)	76-85%
Satisfactory Plus (3.5)	71-75%
Satisfactory (3.0)	66-70%

Grade:	Criteria for exam (if applicable)
Very Good (5.0)	96-100%
Good Plus (4.5)	86-95%
Good (4.0)	76-85%
Satisfactory Plus (3.5)	71-75%
Satisfactory (3.0)	66-70%



**Name and address of module/course teaching unit, contact: telephone and e-mail address**

. Medical University of Wrocław, Department of Human Morphology and Embryology

Division of Anatomy 50-368 Wrocław ul.Chałubińskiego 6a tel 71 784-13-31; 784-00-79

**Coordinator / Person responsible for module/course, contact: telephone and e-mail address**

Marek Syrycki MD PhD ; [marek.syrycki@umed.wroc.pl](mailto:marek.syrycki@umed.wroc.pl) 71/ 784-13-51

**List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.**

Marek Syrycki MD PhD  
Mirosław Trzaska MD PhD  
Sławomir Wozniak MD PhD  
Zygmunt Domagała MD PhD

**Date of Syllabus development**

30.06.2018

**Syllabus developed by**

Marek Syrycki.

**Signature of Head of teaching unit**

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Katedra Morfologii i Embryologii Człowieka  
ZAKŁAD ANATOMII I EMBRYOLOGII  
p.o. katedry  
dr Zygmunt Domagała

**Signature of Faculty Dean**

Wrocław Medical University  
FACULTY OF MEDICINE  
VICE-DEAN FOR STUDIES IN ENGLISH  
Prof. Andrzej Hendrich, PhD