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Course title: ANATOMY 1/2

ECTS credit allocation (and other scores): 8

Semester: autumn

Level of study: ISCED-7 - second-cycle programmes (EQF-7)

Branch of science: Medical and health sciences

Language: English

Number of hours per semester: 100

Course coordinator/ Department and e-mail: Marcelina Łopińska, Department of Anatomy,  
marcelina.lopinska@uwm.edu.plType of classes: classes and lectures

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**Substantive content**

**CLASSES:** General terms: planes and axes, terms of direction and relation, lines used for the body description, types of bones. Bones, joints and ligaments: types and classification of joints (principal and accessory structures of synovial joints). Types of movements. Vertebral column: parts and structural elements of vertebra, typical and atypical cervical, thoracic, and lumbar vertebra, sacrum and coccyx. Structure and function of intervertebral disc. Syndesmoses, synchondroses and synovial joints of vertebral column. True and false ribs, parts. Parts of sternum. Joints of thoracic cavity. Origin and insertion of the muscles. Skull: bones of chondrocranium and desmocranium, neurocranium and splanchnocranium. Topographical elements of the skull (cavities and fossa) and its communication (foramens and canals and their content). Joints of the skull. General terms of nervous system. Central, peripheral and autonomic nervous system. Anatomic, clinical and functional division of the nervous system. Meninges of encephalon and spinal cord. Cerebrospinal fluid spaces and circulation; ventricles. Telencephalon, diencephalon, mesencephalon, rhinencephalon, spinal cord (division, structure, function). Blood supplying of brain and spinal cord. Descending and ascending pathways of spinal cord. Pyramidal and extrapyramidal pathways, sensory pathways. Cranial nerves: nuclei, pathways. Clinical anatomy of central nervous system: clinical effects of the lesions on different levels, basic signs. Head and neck: muscles, fascia, origin and insertion, function. Taste, olfactory, visual, auditory, vestibular pathways. Clinical anatomy of cranial nerves: lesion, paralysis, signs of the injury on different levels. Larynx: structure, innervation, blood supplying. Thyroid gland. Salivary glands. Sensory, motor and autonomic innervation of head and neck. Blood supplying, venous drainage, lymphatic drainage of head and neck. Topographical elements of head and neck. Clinical and radiological anatomy.

**LECTURES:** Topographical and clinical anatomy of the: vertebral column, skull, central nervous system, cranial nerves, head and neck. Cranial cavities and fossa, borders, foramens and canals, its contents and clinical anatomy. Clinical anatomy of paranasal sinuses. External, middle and inner ear. Clinical anatomy of the cranial nerves the location and signs of their injury.

**Learning purpose:** The aim of study: student should know the anatomical nomenclature in English. Student should identify and recognize the principles of the proper human topographical description, axes and the planes of the human body and the cavities of the human bodies. Student understands the basis of embryological development for comprehensive of the anatomical structures. Student knows with the detailed the proper structure of tissues and organs, and understands the relationship between them and their structures and function. They also know the palpable anatomy. Student has knowledge and analyzes movements of the joints. Student understands the anatomy of various organs in the topographical and systematic and descriptive approach. Student is able to identify and correctly names each of anatomical structures on the basis of dissections and dissections of the human bodies and on the basis of radiological images ( X-ray, CT, MRI and angiography) and the individual living people as well. Student

has the anatomical basis for the interpretation of radiological images with elements of an ultrasound, CT and MRI. Student applies the theoretical basis of anatomy into the clinic and properly interprets the clinical situations and clinical cases. Student treats the human bodies and the human remains with highest respect. E

Student can work alone and in the small discussion group. Student together with colleagues solves the problems on the basis of anatomical clinical cases.

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On completion of the study programme the graduate will gain:

**Knowledge:** Student knows anatomical, histological and embryological terminology in English. Student knows structures of the human body in a topographic approach (head and central nervous system, neck, back, upper and lower limb, chest, abdomen, pelvis) and functional (osteoarticular system, muscular system, circulatory system, respiratory system, digestive system, urinary system, reproductive systems, nervous system and sensory organs, integumentary system). Student describes topographic relations between individual organs

**Skills:** Student knows how to explain anatomical basis of physical examination. Student knows how to conclude the relationship between anatomical structures based on intravital diagnostic tests, in particular in the field of radiology (plain film, images using contrast media, computed tomography and nuclear magnetic resonance). Student knows how to use anatomically and embryologically terminology in speech and writing

**Social Competencies:** Student knows how to perceiving and recognizing one's own limitations and self-assessing educational deficits and needs. Student knows how to use of objective sources of information. Student knows how to formulate conclusions from own measurements or observations;

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**Basic literature:** 1) Jerzy St. Gielecki, Anna Żurada, Bones, Joints and Ligaments with 3D phantogram atlas, wyd. MedRadEd, 2018 ; 2) Jerzy St. Gielecki, Anna Żurada, Axial Skeleton Clinical anatomy of skull and spine, wyd. MedRadEd, 2016 ; 3) Richard Drake A. Wayne Vogl Adam Mitchell, Gray's Anatomy for Students 3rd Edition, wyd. Elsevier, 2014 ; 4) Frank H. Netter, Atlas of Human Anatomy 6th Edition, wyd. Elsevier, 2014 ; 5) Peter Abrahams, Johannes Boon, Jonathan Spratt, Marios Loukas, Albert VanSchoor, McMinn and Abrahams' Clinical Atlas of Human Anatomy 7th Edition, wyd. Elsevier, 2013 ; 6) Torsten Bert Moeller Torsten Bert Moeller Emil Reif , Pocket Atlas of Sectional Anatomy Computed Tomography and Magnetic Resonance Imaging, wyd. Thieme, 2017 ; 7) Michael Schuenke, Erik Schulte, Udo Schumacher, Lawrence M Ross, Edward D Lamperti, Markus Voll , THIEME Atlas of Anatomy Series, wyd. Thieme, 2010 ; 8) Torsten Bert Moeller Torsten Bert Moeller Emil Reif , Pocket Atlas of Radiographic Anatomy, wyd. Thieme, 2010

**Supplementary literature:** 1) loukas M, Stephen W. Carmichael, Gray's Anatomy Review, 2nd Edition, wyd. Elsevier, 2016 ; 2) David L. Felten, Anil Shetty, Netter's Atlas of Neuroscience, 2nd Edition , wyd. Elsevier, 2010 ; 4) Gielecki J, Żurada A, gajda G, Cybulski W, The Brain Matters. CD English-Latin-Polish Atlas of Neuroanatomy, wyd. Górnicki Wydawnictwo medyczne, 2008 ; 6) K. Moore, A. Delley, A. Agur, Clinical Oriented Anatomy. 6th edition, wyd. Wolters Kluwer, 2010

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The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 102

Student's independent work: 123