UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN

of Medicine

Course/module syllabus - part A

48SJ-ANATI
ECTS: 8
YEAR: 2020Z

ANATOMY 1/2
ANATOMY 1/2

COURSE 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.

EDUCATIONAL OBJECTIVE:

The aim of study: each of the student should know the anatomical nomenclature in English , he/she should identify and recognized the principles of the proper human topographical description , axes and the planes of the human body and the cavities of the human bodies. The students understand the basis of embryological development for comprehensive of the anatomical structures. They know with the detailed the proper structure of tissues and organs, and they understand the relationship between them and their structures and function. They also know the palpable anatomy. The students have knowledge and they analyze movements of the joints . They understand the anatomy of various organs in the topographical and systematic and descriptive approach. They are able to identify and correctly name each of anatomical structures on the basis of prossections 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. The students have the anatomical basis for the interpretation of radiological images with elements of an ultrasound, CT and MRI . They apply the theoretical basis of anatomy into the clinic and they properly interpret the clinical situations and clinical cases. They treat the human bodies and the human remains with highest respect. Each of the student can work alone and in the small discussion group. Together with colleagues they solve the problems on the basis of anatomical clinical cases.

DESCRIPTION OF LEARNING OUTCOMES FOR THE COURSE IN RELATION TO FIELD AND MAJOR LEARNING OUTCOMES

Codes of learning outcomes in a major field of study:	M/NM+++,
Codes of learning outcomes in a major area of study:	A.U1.+, A.U2.+, A.U3.+, A.W1.+, A.W2.+, A.W3.+, K.5+, K.7.+, K. 8.+,

LEARNING OUTCOMES:

Knowledge

W1 - (A.W1.) - knows anatomical, histological and embryological terminology in Polish and English
W2 - (A.W2.) - knows structure 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)
W3 - (A.W3.) - describes topographic relations between individual organs

Skills

U1 - (A.U1.) - explains anatomical basis of physical examination
U2 - (A.U2.) - concludes 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)
U3 - (A.U3.) - uses anatomically and embryologically terminology in speech and writing

Social competence

K1 - (K.5.) Perceiving and recognizing one's own limitations and self-assessing educational deficits and needs;
K2 - (K.7.) The use of objective sources of information;

Course/module:
Anatomy 1/2
Fields of education:

Course status:	mandatory
Course group:	A - przedmioty podstawowe
ECTS code:	
Field of study:	Medicine
Specialty area:	Medicine
Educational profile:	General academic
Form of study:	full-time
Level of study:	uniform master's studies
Year/semester:	1 / 1

Type of course:
Classes, Lecture

Number of hours per semester/week:	Classes: 80, Lecture: 20

Teaching forms and methods

Classes(K1, K2, K3, U1, U2, U3, W1, W2, W3) : dissection and prosection lab classes with the anatomical speciments and prossections , Lecture(K1, K2, K3, U1, U2, U3, W1, W2, W3) : PowerPoint presentation, interactive lecture, i-clicker

Form and terms of the verification results:

CLASSES: Colloquium test - solved 20 MCQ questions type - true / false (max. 100 points) - passing 70% (K1, K2, K3, U1, U2, U3, W1, W2, W3) ; CLASSES: Evaluation of the work and cooperation in the group - small teaching group classes and problem based classes with "brain storm" discusion (K1, K2, K3, U1, U2, U3, W1, W2, W3) ; CLASSES: Colloquium practical - recognize and name selected 20 anatomical structures in accordance with the applicable anatomical nomenclatures in English and Polish (max. 40 points) - dep. 70% (28 points) (K1, K2, K3, U1, U2, U3, W1, W2, W3) ; LECTURE: Oral exam - understanding and analysis of clinical anatomy problem using 3 problem based question(K1, K2, K3, U1, U2, U3, W1, W2, W3) ; LECTURE: Written exam - (yes/no questions test) - solved 100 MCQ questions type - true / false (max. 500 points) - passing 70% (K1, K2, K3, U1, U2, U3, W1, W2, W3) ; LECTURE: Exam - Practical examination (standardized examination) - recognize and name selected anatomical structures in accordance with the applicable anatomical nomenclatures in English and Polish - passing 70% (K1, K2, K3, U1, U2, U3, W1, W2, W3)

Number of ECTS points:	8
Language of instruction:	English

Introductory courses:
biology

Preliminary requirements:
Knowlege about human morphology and physiology

Name of the organizational unit offering the course:
Katedra Anatomii,

Person in charge of the course:
mgr Marcelina Łopińska, , prof. dr hab. n. med. Jerzy Gielecki,

K3 - (K.8.) Formulate conclusions from own measurements or observations;

Course coordinators:

prof. dr hab. n. med. Jerzy Gielecki, , lek. Oksana Klonowska, , mgr Marcelina Łopińska, , mgr inż. Katarzyna Polak,

Notes:

base and sequence subject

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

Detailed description of the awarded ECTS points - part B

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The awarded number of ECTS points is composed of:

1. Contact hours with the academic teacher:

- participation in: classes	80 h.
- participation in: lecture	20 h.
- consultation	2 h.
	102 h.

2. Student's independent work:

- preparing for the classes	63 h.
- preparing for the credits	30 h.
- preparing for the final exam	30 h.
	123 h.

1 ECTS point = 25-30 h of the average student's work, number of ECTS points = 225 h : 25 h/ECTS = 9,00 ECTS
on average: **8 ECTS**

- including the number of ECTS points for contact hours with direct participation of the academic teacher: 4,08 ECTS points,
- including the number of ECTS points for hours completed in the form of the student's independent work: 3,92 ECTS points,