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FACULTY OF MEDICINE UNIVERSITY OF MONTENEGRO

Erasmus+ KA2 Capacity Building in the field of Higher Education
Strengthening capacities and digital competences in biomedical education through
internationalization at home BIOSINT

101082863-BIOSINT-ERASMUS-EDU-2022-CBHE

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Faculty of Medicine / study program of Stomatology / Anatomy

Course name:	Anatomy			
Code	Status	Year and Semester	ECTS credits	Classes (Lectures, practice, laboratory)
1043	Obligatory	I; semester I and II	13	3+3+0
Study program	Stomatology			
Prerequisite	None			
Objectives	<p>The main course objective is to familiarize students with anatomical characteristics of healthy human subject.</p> <p>Global perspectives are introduced through diverse methodologies and case studies, case reports and studies published in international papers regarding anatomical variations in diverse population, helping students understand how various countries approach the clinical impacts of anatomical variations in certain pathologies. This allows students to gain comparative insights into international standards and practices.</p> <p>By applying theoretical and practical knowledge acquired through studying basic anatomical features in clinical settings, students develop a globally-informed approach that equips them with the skills to address diverse patient needs worldwide.</p> <p>These objectives equip students with a global perspective, preparing them to engage effectively in international settings and with culturally diverse patient populations.</p>			
Learnings Outcomes	<p>After completing the two-semester course and passing the exam in Anatomy, a student of Dentistry should have the following learning outcomes:</p> <ol style="list-style-type: none"> 1. He/she has completely mastered anatomical terminology and has mastered all relevant terms in anatomy. 2. He/she knows the morphology and topography of all organs and regions of the human body. 3. He/she knows the detailed morphology and topography of the head and neck. 4. He/she applies anatomical principles and concepts in anatomical sections and in the description of topographic units 5. He/she is able to recognize and describe all body structures on a model (cadaver): bones, muscles, organs, major blood vessels and nerves. 6. He/she is able to recognize and describe the detailed morphology and topography of the head and neck on the model (cadaver). 7. He/she is able to apply the knowledge about the morphology of organs and systems in mastering the teaching units in clinical medicine and dental medicine (in later years of study). 			
Lecturers	Prof. Dr. M. Radunović, Prof. Dr. A. Vuksanović Božarić and associates.			
Methodology	Lectures, practices, consultations, colloquiums			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week, lecture	Anatomy - introduction, osteology - introduction, clavícula, scapula, humerus, radius, ulna			
I week, practice	Osteology - introduction, clavícula, scapula, humerus, radius, ulna - osteological characteristics, attachment of muscles.			
II week, lecture	Ossa manus - osteological characteristics, carpal canal, arthrologia - introduction, joints of upper extremity, myologia - introduction, regions of upper extremity.			
II week, practice	Ossa manus - osteological characteristics, carpal canal. Division and types of joints. Joints of upper extremity. Division and types of muscles. Regions of upper extremity.			
III week, lecture	Muscles of upper extremity			
III week, practice	Muscles of upper extremity.			
IV week, lecture	Blood vessels and nerves of upper extremity.			
IV week, practice	Division and types of blood vessels. Arteries and veins of upper extremity. Division and types of nerves. Plexus brachialis - lateral and final branches.			
V n week, lecture	Walls of thorax (bones, joints, muscles, orientation lines and points, blood vessels and nerves).			
V week, practice	Walls of thorax (bones, joints, muscles, orientation lines and points, blood vessels and nerves).			
VI week, lecture	Thoracic cavity - division, trachea, bronchus, radix pulmonis, pulmo, pleura, cor - external and internal morphology, structure.			
VI week, practice	Thoracic cavity - division, trachea, bronchus, radix pulmonis, pulmo, pleura, cor - external and internal morphology.			
VII week, lecture	Blood vessels and nerves of the heart, projections, pericardium, mediastinum - division and content.			
VII week, practice	Blood vessels and nerves of the heart, projections, pericardium, mediastinum - division and content.			

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VIII week, lecture	Vertebrae lumbales, os sacrum, os coxae, femur, patella, tibia, fibula. Colloquium I
VIII week, practice	Vertebrae lumbales, os sacrum, os coxae, femur, patella, tibia, fibula - osteological characteristics, attachment of muscles. Colloquium I
IX week, lecture	Ossa pedis, joints of lower extremity, muscles of lower extremity - anterior side.
IX week, practice	Ossa pedis, joints of lower extremity, muscles of lower extremity - anterior side.
X week, lecture	Muscles of lower extremity - posterior side, blood vessels and nerves of lower extremity.
X week, practice	Muscles of lower extremity - posterior side, blood vessels and nerves of lower extremity.
XI week, lecture	Abdomen: borders, regions, muscles of abdominal walls, inguinal canal, division of abdominal cavity, peritoneum, gaster, intestinum tenue et crassum, mesenterium, mesocolon.
XI week, practice	Abdomen: borders, regions, muscles of abdominal walls, inguinal canal, division of abdominal cavity, peritoneum, gaster, intestinum tenue et crassum, mesenterium, mesocolon.
XII week, lecture	Hepar, bile ducts, v. portae hepatis, spatium retroperitoneale, ren, glandula suprarenalis, ureter
XII week, practice	Hepar, bile ducts, v. portae hepatis, spatium retroperitoneale, ren, glandula suprarenalis, ureter
XIII week, lecture	Pancreas, splen, pars abdominalis aortae, v. cava inferior, plexus coeliacus, pelvis, perineum
XIII week, practice	Pancreas, splen, pars abdominalis aortae, v. cava inferior, plexus coeliacus, pelvis, perineum.
XIV week, lecture	Blood vessels and nerves of pelvis, pelvic cavity - division, vesica urinaria, rectum, organa genitalia masculina.
XIV week, practice	Blood vessels and nerves of pelvis, pelvic cavity - division, vesica urinaria, rectum, organa genitalia masculina
XV week, lecture	Organa genitalia feminina. Colloquium II
XV week, practice	Organa genitalia feminina. Kolokvijum II
XVI week, lecture	Os frontale, os occipitale, os sphenoidale, os ethmoidale.
XVI week, practice	Os frontale, os occipitale, os sphenoidale, os ethmoidale - osteological characteristics, attachment of muscles.
XVII week, lecture	Os parietale, os temporale, mandibula, vomer, os hyoideum, vertebrae cervicales.
XVII week, practice	Os parietale, os temporale, mandibula, vomer, os hyoideum, vertebrae cervicales - osteological characteristics.
XVIII week, lecture	Even facial bones, craniofacial cavities, skull of a newborn, joints of head and neck, regio cervicalis anterior.
XVIII week, practice	Even facial bones, craniofacial cavities, skull of a newborn, joints of head and neck, regio cervicalis anterior.
XIX week, lecture	Regio cervicalis lateralis et posterior (plexus cervicalis, a. subclavia), regio retromandibularis (n. facialis, a. carotis externa, v. jugularis externa).
XIX week, practice	Regio cervicalis lateralis et posterior (plexus cervicalis, a. subclavia), regio retromandibularis (n. facialis, a. carotis externa, v. jugularis externa).
XX week, lecture	Regio infratemporalis (mm. masticatorii, a. maxillaris, n. trigeminus), spatium peripharyngeum (podjela i sadržaj).
XX week, practice	Regio infratemporalis (mm. masticatorii, a. maxillaris, n. trigeminus), spatium peripharyngeum (podjela i sadržaj).
XXI week, lecture	Cavitas nasi, sinus paranasales, pharynx, cavitas oris.
XXI week, practice	Cavitas nasi, sinus paranasales, pharynx, cavitas oris - morphological characteristics.
XXII week, lecture	Larynx, nervus II, III, IV, VI, bulbus oculi.
XXII week, practice	Larynx - morfološke karakteristike. Nervus II, III, IV, VI, bulbus oculi.
XXIII week, lecture	Organa oculi accessoria, auris externa, auris media.
XXIII week, practice	Organa oculi accessoria, auris externa, auris media.
XXIV week, lecture	Auris interna, n. VIII, neurologia - introduction, division of central nervous system, medulla spinalis - external and internal morphology.
XXIV week, practice	Auris interna, n. VIII. Division of central nervous system, medulla spinalis - external and internal morphology.
XXV week, lecture	Medulla oblongata, pons, cerebellum (external and internal morphology), ventriculus IV
XXV week, practice	Medulla oblongata, pons, cerebellum (external and internal morphology), ventriculus IV
XXVI week, lecture	Mesencephalon, diencephalon (external and internal morphology), ventriculus III.
XXVI week, practice	Mesencephalon, diencephalon (external and internal morphology), ventriculus III.
XXVII week, lecture	Telencephalon, commissures of forebrain (external and internal morphology).

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XXVII week, practice	Telencephalon, commissures of forbrain (external and internal morphology) - parts, morphological characteristics, functional significance.
XXVIII week, lecture	Olfactory brain (external morphology), ventriculus lateralis, limbic system. Motor pathways.
XXVIII week, practice	Olfactory brain, ventriculus lateralis, limbic system - parts, morphological characteristics, functional significance. Motor pathways - division, description, functional significance..
XXIX week, lecture.	Extrapyramidal motor system, sensitive and sensory pathways
XXIX week, practice	Extrapyramidal motor system - parts, morphological characteristics, functional significance. Sensitive and sensory pathways - division, description, functional significance.
XXX week, lecture	Meninx, intercerebral spaces, liquor cerebrospinalis, arteries and veins of central nervous system.
XXX week, practice	Meninx, intercerebral spaces, liquor cerebrospinalis, arteries and veins of central nervous system.
Student workload	I semester: Weekly: 6 credits x 40/30 = 8 hours; Structure: 3 hours of lectures, 3 hours of practical classes, 2 hours of independent work. During the semester: Classes and final exam: 8 hours x 16 = 128 hours; Necessary preparations before the beginning of semester (enrollment, certification...) 8 hours x 2 = 16 hours; Overall workload: 6 x 30 = 180 hours Supplementary work from 36 hours Structure of workload: 128 hours (classes and final exam) + 16 hours (preparation) + 36 hours (supplementary work) = 180 hours II semester: Weekly: 7 credits x 40/30 = 9 hours and 20 minutes; Structure: 3 hours of lectures, 3 hours of practical classes, 3 hours and 20 minutes of independent work. During the semester: Classes and final exam: 9 hours and 20 minutes x 16 = 149 hours and 20 minutes; Necessary preparations before the beginning of semester (enrollment, certification...) 9 hours and 20 minutes x 2 = 18 hours and 40 minutes; Overall workload: 7 x 30 = 210 hours; Supplementary work from 42 hours; Structure of workload: 149 hours and 20 minutes (classes and final exam) + 18 hours and 40 minutes (preparation) + 42 hours (supplementary work) = 210 hours
Weekly	During the semester
13 credits x 40/30=17 hours and 20 minutes 3 hours of lectures 3 hours of practice 11 hours and 20 minutes Independent work	Teaching and final exam: 17 hours and 20 minutes x 16 =277 hours and 20 minutes Necessary preparation before beginning of semester (administration): 17 hours and 20 minutes x 2 =34 hours and 40 minutes Total for the semester: 13 x 30=390 hours Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 78 hour(s) Workload structure: 277 hour(s) i 20 minutes (courses), 34 hour(s) i 40 minutes (preparation), 78 hour(s) i 0 minutes (additional work)
Student obligations during the semester	Theoretical and practical lectures are obligatory for students
Consultations	Consultations are held once per week, in time period of two school classes (1 hour and 30minutes) with every lecturer or associate.
Literature	Obligatory literature: Antić S, Čukuranović R, Stefanović N, Pavlović S, Vasović LJ, Arsić S. Anatomija čoveka - za studente stomatologije (ruka, grudni koš, trbuh, karlica, noga). Medicinski fakultet Niš; 2009. Stefanović N, Antić S. Anatomija gornjeg ekstremiteta. Medicinski fakultet Niš; 1998. Stefanović N, Vlaković S, Bjelaković Daković M, Ugrenović S, Jovanović I. Anatomija čoveka - grudni koš. Medicinski fakultet Niš; 2008. Čukuranović R. Anatomija čoveka - abdomen. Medicinski fakultet Niš; 2000. Marjanović S, Stefanović N, Bakić V, Čukuranović R. Anatomija čoveka - mala karlica. Medicinski fakultet Niš; 1997. Stefanović N, Antić S, Pavlović S. Anatomija donjeg ekstremiteta. Medicinski fakultet Niš; 2002. Stefanović N, Pavlović S, Vasović LJ, Antić S, Čukuranović R, Arsić S. Anatomija čoveka - glava i vrat. Medicinski fakultet Niš; 2006. Pavlović S, Stefanović N, Vučetić R, Antić S, Čukuranović R, Arsić S. Anatomija centralnog nervnog sistema i čula. Medicinski fakultet Niš; 2004. Netter F. Atlas anatomije čoveka, Beograd: Data Status; 2011. Recommended additional literature: Drake R, Vogel W, Mitchell A. Gray's anatomy for students. Philadelphia: Elsevier Churchill Livingstone; 2005. Atkinson, Martin E, Anatomy for Dental Students (Oxford, 2013; online edition, Oxford Academic, 12 Nov. 2020) Neil S. Norton PhD. Netter's Head and Neck Anatomy for Dentistry, 3rd edition (Netter Basic Science). Philadelphia: Elsevier Churchill Livingstone 2013.

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