



Univerza v Mariboru

Medicinska fakulteta

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Ime predmeta:	Anatomija s histologijo in embriologijo
Course title:	Anatomy with histology and embryology

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Splošna medicina, enovit magistrski študijski program		Prvi	1., 2.
General medicine, Uniform master's degree study program		First	1st, 2nd

Vrsta predmeta (obvezni ali izbirni) /
Course type (compulsory or elective)

obvezni
compulsory

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial			Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
90	45						225	16
		AV	LV	RV				
			12 0					

Nosilec predmeta / Course coordinator:

Prof. dr. Božena Pejčević

Jeziki /Languages:

Predavanja / Lectures:

slovenski/slovene

Vaje / Tutorial:

slovenski/slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites for enrolling in the course or for performing study obligations:

Vsebina (kratek pregled učnega načrta):

Anatomija
Vsebina obsega sistematsko in topografsko anatomijo človeškega telesa
-Uvod v anatomijo
-Prsni koš
-Trebuš

Content (syllabus outline):

Anatomy
Content comprises systematic and topographic anatomy of human body
-Introduction to anatomy
-Thorax
-Abdomen

-Medenica -Zgornji ud -Spodnji ud - Vrat in glava -Centralni živčni sistem Histologija Vsebina obsega splošno in specialno histologijo človeškega telesa Splošna histologija -Epitelijska tkiva -Veziva -Mišičnina -Živčno tkivo Specialna histologija -Obtočila -Kri -Imunski sistem in limfni organi -Endokrine žleze -Prebavila -Dihala -Sečila -Moška spolovila -Ženska spolovila -Koža -Periferno in centralno živčevje -Čutila Embriologija Splošna embriologija Gametogeneza Od oploditve do vgneždenja Oblikovanje dvolistnega embrionalnega ščita Oblikovanje trilstnega embrionalnega ščita Plodove membrane in posteljica Specialna embriologija Razvoj srca in obtočil Razvoj živčevja Razvoj prebavil Razvoj dihal Razvoj urogenitalnega sistema Razvoj škržnih (branchialnih) organov	-Pelvis -Superior extremity -Inferior extremity -Neck and head -Central nervous system Histology Content comprises general and special histology of human body General histology -Epithelia -Connective tissue -Muscular tissue -Nervous tissue Special histology -Vascular system -Blood -Immune system and lymphatic organs -Endocrine glands -Digestive system -Respiratory system -Urinary system -Male genital organs -Female genital organs -Skin -Peripheral and central nervous system -Organs of special senses Embryology General embryology Gametogenesis From ovulation to implantation Development of bilaminar germ disc Development of trilaminar germ disc Fetal membranes and placenta Special embryology Development of cardiovascular system Development of nervous system Development of digestive system Development of respiratory system Development of urogenital system Development of pharyngeal organs
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Temeljni literatura in viri / Reading materials:**Temeljni viri/Fundamental textbooks**

1. Drake RL, Vogl W, Mitchell AW: Gray's Anatomy for Students. Elsevier Churchill Livingstone, New York 2014
2. PEJKOVIĆ, Božena, JESENŠEK, Marko. Vodnik skozi anatomsko terminologijo = Ductio per terminologiam anatomicam. 1. izd. Maribor: Medicinska fakulteta, 2013
3. Young, Woodford, O'Dowd: Wheather's Functional Histology, 6th Ed. Elsevier 2013

Priporočeni viri/Recommended textbooks

1. Pejković B: Anatomija človeškega telesa – compendium topografske anatomije in navodila za vaje, MF UM 2007
2. Draganić V, Jeličić N, Djordjević Lj, Radonjić V, Pejković B. Anatomija čoveka – priručnik za praktičnu nastavu. Četvrto izmenjeno i dopunjeno izdanje, Savremena administracija, Beograd, 2012
3. Rohen JW: Topographische Anatomie. Schattauer FK, 2008
4. Hansen JT: Netter's Clinical Anatomy, 3rd Ed. Elsevier, 2014
5. Drake RL, Vogl W, Mitchell AW Gray's Atlas of Anatomy, Elsevier, 2014
6. Junqueira LC, Carneiro J: BASIC HISTOLOGY. Textbook and Atlas. Lange Medical Book Mc Graw Hill, 2007.
7. Carlson Human Embryology and Developmental Biology 5th Ed. Elsevier, 2013
8. Young, Woodford, O'Dowd: Wheather's Functional Histology, 6th Ed. Elsevier 2013
9. Štiblar Martinčič D. HISTOLOGIJA, Univerzitetni učbenik, MF UM, Maribor oktober 2010
10. Štiblar Martinčič D, Munda M. HISTOLOGIJA, Navodila za vaje. Univerzitetni učbenik, MF UM, Maribor oktober 2009.
11. Štiblar-Martinčič D. EMBRIOLOGIJA, Univerzitetni učbenik, MF UM, Maribor oktober 2011

Cilji in kompetence:

Zagotoviti študentu znanje anatomije, histologije in embriologije, ki je potrebno za razumevanje poznejših predkliničnih in kliničnih predmetov.

Objectives and competences:

Provide a student with knowledge of anatomy, histology and embryology that is necessary for understanding of other preclinical and clinical subjects.

Predvideni študijski rezultati:

Znanje in razumevanje:

Študent mora poznati razmere na trupu in anatomskih modelih ob upoštevanju vseh vidikov anatomije na živem; temeljno je poznavanje anatomije pri odraslem človeku. V nekaterih primerih je potrebno poznati tudi specifično anatomijo različnih starostnih obdobjev ter možne pogostejše variante, kar je pomembno za razumevanje klinične medicine. Znanje histologije – mikroskopske zgradbe človekovega organizma, s posebnim poudarkom na funkciji posameznih celic, tkiv in organov (histofiziologija) in spoznanje posameznih stopenj v embrionalnem razvoju je enako pomembno za nadaljnji študij.

Prenesljive/ključne spretnosti in drugi atributi:

Temeljno medicinsko znanje o zgradbi in delovanju ter razvoju zdravega človeškega telesa omogoča študentu, da tekom nadaljnega študija to znanje uporabi za razumevanje bolezenskih sprememb in razvojnih anomalij.

Intended learning outcomes:

Knowledge and understanding: A student has to recognize the relations on cadavers and anatomical models in consideration of all the aspects of anatomy in living human. Knowing of anatomy of adult human body is basic, although in some instances it is necessary to recognize anatomical variations of different periods of human age, which is important for understanding of clinical medicine. The knowing of histology – the microscopic structure of human organism, with an emphasise on the function of certain cells, tissues and organs (histophysiology) and the knowledge of certain stages in embryonal development is also important for further studies.

Transferable/Key Skills and other attributes:

The basic medical knowledge about the structure, function and the development of the healthy human body, enables a student to apply it in recognition and comprehension of pathological changes and developmental anomalies in the course of his further studies.

Metode poučevanja in učenja:**Learning and teaching methods:**

predavanja, seminarji, laboratorijske vaje	lectures, seminars, laboratory work
Načini ocenjevanja:	
Način (pisni izpit, ustno izpraševanje, naloge, projekt):	Delež (v %) / Share (in %) Assessment methods:
ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV Opravljene vaje (100%) Opravljeni seminarji (100%) POGOJ ZA PRISTOP K IZPITU so opravljeni vsi obvezni kolokviji iz Anatomije (70%): • Thorax (10%) • Abdomen (10%) • Pelvis (10%) • Membrum superius (2,5%) • Membrum inferius (2,5%) • Collum et caput (25%) • Systema nervosum centrale (10%) in Histologije z embriologijo (30 %) Pogoji za prijavo na izpit in pristop k izpitu so opravljeni vsi obvezni kolokviji. Študenti, ki niso opravili vseh obveznih kolokvijev, morajo opraviti predizpitni kolokvij. Predizpitni kolokvij sestoji iz vseh manjkajočih kolokvijev in ga opravljajo študenti pred izpitom. Pogoj za pristop k predizpitnemu kolokviju je prijava na izpit. IZPIT Pisni izpit 50% ustni izpit 50% Izpit je sestavljen iz dveh delov: 1) pisni del - študent mora točno in pravilno napisati odgovore na zastavljena vprašanja iz anatomije človeškega telesa in pri tem upoštevati veljavno anatomsko nomenklaturu 2) ustni del - študent mora točno odgovoriti na vprašanja iz anatomije človeškega telesa. Pogoj za pristop k ustnemu delu izpita je opravljen pisni del. Razmerje 50% : 50% velja samo v primeru obeh pozitivnih ocen.	Method (written or oral exam, coursework, project): ACADEMIC OBLIGATIONS OF STUDENTS: Completed practical work (100%) Completed seminars (100%) REQUIREMENTS FOR ACCESS TO INDIVIDUAL KNOWLEDGE CHECKING: are completed all the obligatory colloquia Anatomy (70%): • The thorax (10%) • The abdomen (10%) • The pelvis (10%) • The superior extremity (2,5%) • The inferior extremity (2,5%) • The neck and head (25%) • The central nervous system (10%) And Histology with embryology (30%) Conditions for sign-up and approach to the examination are completed all the obligatory colloquia. The students who did not complete all the obligatory colloquia must pass the preexamination colloquium. The preexamination colloquium consists of all the missing colloquia and it must be completed before the examination. The condition for approaching the preexamination colloquium is the sign-up to the examination. THE EXAMINATION written examination 50% oral examination 50 % The exam consists of two parts: 1) the written part - the student must answer correctly the questions and name correctly the anatomical terms according to the latin anatomic nomenclature 2) the oral part - the student must answer correctly the questions from the anatomy of the human body. Condition to access the oral exam is completed written exam, Ratio 50%: 50% may be considered only in case of both positive marks.

Reference nosilca / Course coordinator's references:

BOŽENA PEJKOVIĆ:

KOŠUTIĆ, Damir, PEJKOVIĆ, Božena, ANDERHUBER, Friedrich, VADNJAL, Sabina, ŽIC, Rado, GULIC, Rozita, KRAJNC, Ivan, ŠOLMAN, Lea, KOCBEK, Lidija. Complete mapping of lateral and medial sural artery perforators : anatomical study with Duplex-Doppler ultrasound correlation. *Journal of plastic, reconstructive & aesthetic surgery*, ISSN 1748-6815, 2012, vol. 65, issue 11, str. 1530-1536, doi: 10.1016/j.bjps.2012.04.045. [COBISS.SI-ID 512228408], [JCR, SNIP, WoS do 5. 1. 2013: št. citatov (TC): 0, čistih citatov (CI): 0, normirano št. čistih citatov (NC): 0, Scopus do 30. 10. 2012: št. citatov (TC): 0, čistih citatov (CI): 0, normirano št. čistih citatov (NC): 0]

KOŠUTIĆ, Damir, PEJKOVIĆ, Božena. Applied clinical anatomy of perforator flaps : microsurgery meets radiology. V: Abstracts for the IVth International Symposium of Clinical and Applied Anatomy (ISCAA), 28 June-1 July 2012, Ankara, Turkey & the XIVth National Congress of Anatomy, 28 June-1 July 2012, Ankara, Turkey, (Anatomy, ISSN 1307-8798, vol. 6, suppl. (2012)). Istanbul: Turkish Society of Anatomy and Clinical Anatomy (TSACA), cop. 2012, vol. 6, suppl. June, str. S9. [COBISS.SI-ID 512217912]

PEJKOVIĆ, Božena, KOCBEK, Lidija, KOŠUTIĆ, Damir, BELE, Uroš, KELC, Robi, ŠARENAC, Tomislav, KRAJNC, Ivan. Anatomical peculiarities of cardiac blood vessels in the human heart. V: 3rd International Symposium of Clinical and Applied Anatomy, University of Maribor, Faculty of Medicine, 22-24 July 2011. PEJKOVIĆ, Božena (ur.), ŠTIBLAR-MARTINČIČ, Draga (ur.). Book of abstracts. Maribor: Faculty of Medicine, 2011, str. 19. [COBISS.SI-ID 512135992]

DRAGANIĆ, Vera, JELIČIĆ, Nadežda A., ĐORĐEVIĆ, Ljubica, RADONJIĆ, Vidosava, PEJKOVIĆ, Božena, DRAGANIĆ, Vera (urednik). Anatomija čoveka : priručnik za praktičnu nastavu. 4. izmenjeno i dopunjeno izd. Beograd: Savremena administracija, 2012. 431 str., ilustr. ISBN 978-86-387-0802-4. [COBISS.SI-ID 188451084]
2.06 Enciklopedija, slovar, leksikon, priročnik, atlas, zemljevid

PEJKOVIĆ, Božena, JESENŠEK, Marko. Vodnik skozi anatomsko terminologijo = Ductio per terminologiam anatomicam. 1. izd. Maribor: Medicinska fakulteta, 2013. 190, 182 str., ilustr. ISBN 978-961-6739-47-4. [COBISS.SI-ID 267753472]