

UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION

Predmet:	Anatomija s histologijo in embriologijo
Subject Title:	Anatomy with Histology and Embryology

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Dentalna medicina/Dental Medicine 2. stopnja/2nd cycle		1	1., 2. 1., 2.

Vrsta predmeta / Course type

Obvezni/Compulsory

Univerzitetna koda predmeta / University subject 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	120			225	16

Nosilec predmeta / Lecturer:

doc. dr. Lidija Kocbek Šaherl
doc. dr. Mateja Rakuša

Jeziki /

Predavanja / Lecture: slovenščina/slovene

Languages:

Vaje / Tutorial: slovenščina/slovene

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

Prerequisites:

Vsebina:

Anatomija

Vsebina obsega sistematsko in topografsko anatomijo človeškega telesa s poudarkom na glavi in vratu:

- Uvod v anatomijo
- Vrat in glava
- Centralni živčni sistem
- Prsni koš
- Trebuh
- Medenica
- Zgornji ud
- Spodnji ud

Histologija

Vsebina obsega splošno in specialno histologijo človeškega telesa

Splošna histologija

-Epitelijska tkiva

-Veziva

-Mišičnina

-Živčno tkivo

Specialna histologija

-Obtočila

-Kri

Content (Syllabus outline):

Anatomy

Content comprises systematic and topographic anatomy of human body with emphasis on the head and neck:

- Introduction to anatomy
- Neck and head
- Central nervous system
- Thorax
- Abdomen
- Pelvis
- Superior extremity
- Inferior extremity

Histology

Content comprises general and special histology of human body

General histology

-Epithelia

-Connective tissue

-Muscular tissue

-Nervous tissue

Special histology

-Vascular system

-Blood

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-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 vgnezdenja
Oblikovanje dvolistnega embrionalnega ščita
Oblikovanje trilistnega embrionalnega ščita
Plodove membrane in posteljica
Specialna embriologija
Razvoj srca in obočil
Razvoj živčevja
Razvoj prebavil
Razvoj dihal
Razvoj urogenitalnega sistema
Razvoj škržnih (branhialnih) organov

-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

Temeljni literatura in viri / Textbooks:

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 anatomske terminologije = Ductio per terminologiam anatomicam. 1. izd. Maribor: Medicinska fakulteta, 2013
3. Young, Woodford, O'Dowd: Wheather's Functional Histology, 6th Ed. Elsevier 2013

Dopolnilna literatura:

1. Pejčović B: Anatomija človeškega telesa – compendium topografske anatomije in navodila za vaje, MF UM 2007
2. Draganić V, Jeličić N, Djordjević Lj, Radonjić V, Pejčović B. Anatomija človeka – 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:

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

Predvideni študijski rezultati:

Znanje in razumevanje:

Študent mora poznati razmere na truplu in anatomske modele ob upoštevanju vseh vidikov anatomije na živem; temeljno je poznavanje anatomije pri odraslem človeku. V nekaterih primerih je potrebno poznati tudi

Objectives:

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

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

specifično anatomijo različnih starostnih obdobj 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 nadaljnjega študija to znanje uporabi za razumevanje bolezenskih sprememb in razvojnih anomalij.

Metode poučevanja in učenja:

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 emphasis 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.

Learning and teaching methods:

Predavanja
Seminarji
Vaje

Lectures
Seminars
Tutorial

Načini ocenjevanja:**Delež (v %) /
Weight (in %)****Assessment:**

Način (pisni izpit, ustno izpraševanje, naloge, projekt):	Delež (v %) / Weight (in %)	Assessment:
<p>ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV Opravljene vaje (100%) Opravljene seminarji (100%)</p> <p>POGOJ ZA PRISTOP K IZPITU so opravljeni vsi obvezni kolokviji iz Anatomije (80%):</p> <ul style="list-style-type: none"> – Thorax, Abdomen, Pelvis (20%) – Membrum superius (1,5%) – Membrum inferius (1,5%) – Collum et caput (50%) – Systema nervosum centrale (7%) <p>in Histologije z embriologijo (20%)</p> <p>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.</p> <p>IZPIT pisni izpit 50 % ustni izpit 50 %</p> <p>Izpit je sestavljen iz dveh delov: 1) pisni del - študent mora pravilno odgovoriti na vprašanja iz topografske anatomije glave in vratu ter ostalih delov človeškega telesa</p>	<p>Anatomija s histologijo in embriologijo (100 %) od tega 50 % 50 %</p>	<p>Type (examination, oral, coursework, project):</p> <p>ACADEMIC OBLIGATIONS OF STUDENTS: Completed practical work (100%) Completed seminars (100%)</p> <p>REQUIREMENTS FOR ACCESS TO INDIVIDUAL KNOWLEDGE CHECKING: are completed all the obligatory colloquia Anatomy (80%):</p> <ul style="list-style-type: none"> – The thorax. The abdomen, The pelvis (20%) – The superior extremity (1,5%) – The inferior extremity (1,5%) – The neck and head (50%) – The central nervous system (7%) <p>And Histology with embryology (20%)</p> <p>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 preexaminational colloquium. The preexaminational colloquium consists of all the missing colloquia and it must be completed before the examination. The condition for approaching the preexaminational colloquium is the sign-up to the examination.</p> <p>THE EXAMINATION written examination 50% oral examination 50%</p> <p>The exam consists of two parts: 1) the written part - the student must answer correctly the questions from the topographical anatomy head, neck and other parts of the human body</p>

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2) ustni del - študent mora točno odgovoriti na vprašanja iz topografske anatomije glave in vratu ter ostalih delov človeškega telesa.		2) the oral part - the student must answer correctly the questions from the topographical anatomy head, neck and other parts of the human body.
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Reference nosilke, sonosilke/Lecturer's references:

KOCBEK ŠAHERL, Lidija, RAKUŠA, Mateja. An anatomical description of the obturator region with clinical aspects. Journal of the Anatomical Society of India, ISSN 2352-3050, 2022, vol. 71, iss. 3, str. 234-241. <https://www.jasi.org.in/currentissue.asp?sabs=n>, doi: 10.4103/JASI.JASI_134_20. [COBISS.SI-ID 127037699]

RAKUŠA, Mateja, KOCBEK ŠAHERL, Lidija. Thiel embalming method used for anatomy dissection as an educational tool in teaching human anatomy, in research, and in training in comparison of different methods for long term preservation. Folia Morphol 2022; DOI: 10.5603/FM.a2022.0055

KOCBEK ŠAHERL, Lidija, GOSAK, Marko, RAKUŠA, Mateja. Identification and quantitative analysis of branching networks of the posterior intercostal arteries. Anatomical science international, ISSN 1447-073X, 2020, vol. 95, iss.4, str. [508]-515, ilustr. <https://link.springer.com/article/10.1007/s12565-020-00548-w>, doi: 10.1007/s12565-020-00548-w. [COBISS.SI-ID 16953347],

KOCBEK ŠAHERL, Lidija, RAKUŠA, Mateja. The right intercostobronchial trunk: anatomical study in respect of posterior intercostal artery origin and its clinical application. Surgical and radiologic anatomy, ISSN 1279-8517, Jan. 2018, vol. 40, iss. 1, str. 67-73. <https://link.springer.com/content/pdf/10.1007%2Fs00276-017-1943-7.pdf>, doi: 10.1007/s00276-017-1943-7. [COBISS.SI-ID 512766264]

KOCBEK ŠAHERL, Lidija, RAKUŠA, Mateja. Common trunk of the posterior intercostal arteries from the thoracic aorta: anatomical variation, frequency, and importance in individuals. Surgical and radiologic anatomy, ISSN 1279-8517, 2018, vol. 40, iss. 4, str. 465-470, ilustr. <https://link.springer.com/article/10.1007/s00276-018-2000-x/fulltext.html>, doi: 10.1007/s00276-018-2000-x. [COBISS.SI-ID 512785208]