



Univerza v Mariboru

Medicinska fakulteta



Univerza v Mariboru

Fakulteta za kemijo
in kemijsko tehnologijo

2026/2027

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Anatomija s histologijo
Course title:	Anatomy with Histology

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Farmacija, 2. stopnja		1.	2.
Pharmacy, 2. level		1.	2.

Vrsta predmeta / Course type: obvezni/obligatory

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Clinical training	Druge oblike		ECTS
				Študija Other forms of study	Samost. delo Individual work	
45	15	15			105	6

Nosilec predmeta / Lecturer: doc. dr. Lidija Kocbek Šaherl, dr. med., dr. vet. med.

Jeziki / Predavanja / Lectures: slovenski/slovene
Languages: Vaje / Tutorial: slovenski/slovene

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

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Vsebina:	Content (Syllabus outline):
<p>Anatomija Vsebina obsega sistematsko in topografsko anatomijo človeškega telesa</p> <ul style="list-style-type: none"> • Uvod v anatomijo • Prsni koš • Trebuh • Medenica • Zgornji ud • Spodnji ud • Vrat in glava • Centralni živčni sistem <p>Histologija Vsebina obsega splošno in specialno histologijo človeškega telesa <i>Splošna histologija</i></p> <ul style="list-style-type: none"> • Epitelijska tkiva • Veziva • Mišičnina • Živčno tkivo 	<p>Anatomy Content comprises systematic and topographic anatomy of human body</p> <ul style="list-style-type: none"> • Introduction to anatomy • Thorax • Abdomen • Pelvis • Superior extremity • Inferior extremity • Neck and head • Central nervous system <p>Histology Content comprises general and special histology of human body <i>General histology</i></p> <ul style="list-style-type: none"> • Epithelia • Connective tissue • Muscular tissue • Nervous tissue

2026/2027

Specialna histologija

- Obtočila
- Kri
- Imunski sistem in limfni organi
- Endokrine žleze
- Prebavila
- Dihala

Special histology

- Vascular system
- Blood
- Immune system and lymphatic organs
- Endocrine glands
- Digestive system
- Respiratory system

Temeljni literatura in viri / Readings:

TEMEJNA LITERATURA:

1. Drake RL, Vogl W, Mitchell AW: Gray's Anatomy for Students. Elsevier Churchill Livingstone, New York 2014.
2. PEJKOVIČ, 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.
4. Pejković B.: Anatomija človeškega telesa: compendium topografske anatomije in navodila za vaje, 1. ponatis, 1. izd. Univerza v Mariboru, Maribor 2021.
5. Netter FH: Atlas Of Human Anatomy with LATIN TERMINOLOGY, Elsevier, Philadelphia 2019.

DODATNA LITERATURA:

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. Štiblar Martinčič D. HISTOLOGIJA, Univerzitetni učbenik, MF UM, Maribor oktober 2010.
8. Štiblar Martinčič D, Munda M. HISTOLOGIJA, Navodila za vaje. Univerzitetni učbenik, MF UM, Maribor oktober 2009.

Cilji in kompetence:

Cilj predmeta Anatomija s histologijo je, da bo študent poznal in aktivno uporabljal znanje glede vseh elementov makroskopske in mikroskopske zgradbe človeškega telesa. Cilj je osvojiti znanje, ki bo študentu omogočilo razumevanje delovanja organskih sistemov in posebnosti farmakokinetike ter farmakodinamike zdravilnih učinkovin in pomožnih snovi. Študent bo tudi obvladal osnove morfologije mišično-skeletnega sistema, srca in ožilja, osnove nevrologije in splahnologije.

Predvideni študijski rezultati:

Znanje in razumevanje:

Študentje poznajo sestavo in zgradbo človeškega telesa, osnovne biološke zakonitosti in povezanost med morfologijo in funkcijo posameznih organskih sistemov kar jim omogoča razumevanje farmakodinamskih procesov.

Prenesljive/ključne spretnosti in drugi atributi:

Objectives and competences:

The aim of Anatomy with Histology is for the student to learn and actively apply knowledge of all elements of the macroscopic and microscopic structure of the human body. The aim is to acquire knowledge that will enable the student to understand the functioning of organ systems in relation to pharmacokinetics and pharmacodynamics of active substances and excipients. The student will also be able to master the basics of the morphology of the musculoskeletal system, the cardiovascular system, the basics of neurology and splahnology.

Intended learning outcomes:

Knowledge and understanding:

The students learn the structure of the human body, the elementary biological order and the relations between morphology and function, that enables them to understand pharmacodynamic processes.

Transferable/Key Skills and other attributes:

Students will be able to:

2026/2027

<p>Študenti znajo:</p> <ul style="list-style-type: none"> - predvideti delovanje zdravil, njihovo farmakodinamiko in farmakokinetiko na osnovi ciljnih organov. -določiti selektivnost delovanja zdravil na izbrane organske sisteme, kar je ključ za učinkovito zdravljenje. -povezati anatomsko zgradbo organov s fiziologijo in možnimi patološkimi stanji 	<ul style="list-style-type: none"> - predict the activity of medicines, their pharmacodynamics and pharmacokinetics based on target organs -determine the selectivity of the effect of medicines on selected organic systems, which is the key to effective treatment. -correlate the anatomical structure of organs with physiology and possible pathological conditions
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Metode poučevanja in učenja:

Learning and teaching methods:

<p>Predavanja Seminarji Vaje (laboratorijske)</p> <p>V okviru seminarjev se bodo obravnavale aktualne teme s področja predmeta</p>	<p>Lectures Seminars Tutorial (laboratory work)</p> <p>The seminars will cover trending topics in the subject area</p>
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Načini ocenjevanja:

**Delež (v %) /
Weight (in %)**

Assessment:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)		Type (examination, oral, coursework, project):
<ul style="list-style-type: none"> • pisni izpit • ustni izpit 	<p>20 % 80 %</p>	<ul style="list-style-type: none"> • written exam • oral exam
<p>ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV</p> <ul style="list-style-type: none"> • 80 % prisotnost na seminarjih in vajah 		<p>ACADEMIC OBLIGATIONS OF STUDENTS</p> <ul style="list-style-type: none"> • 80 % attendance at seminars and tutorials
<p>POGOJ ZA PRISTOP K IZPITU</p> <ul style="list-style-type: none"> • 80 % prisotnost na seminarjih in vajah 		<p>CONDITIONS FOR TAKING THE EXAM</p> <ul style="list-style-type: none"> • 80 % attendance at seminars and tutorials

Reference nosilca / Lecturer's references:

1. KOCBEK ŠAHERL, Lidija, GOSAK, Marko, RAKUŠA, Mateja. Identification and quantitative analysis of branching networks of the posterior intercostal arteries. *Anatomical science international*. 2020, vol. 95, iss.4, str. [508]-515, ilustr. ISSN 1447-073X. <https://link.springer.com/article/10.1007/s12565-020-00548-w>, DOI: 10.1007/s12565-020-00548-w. [COBISS.SI-ID 16953347]
2. 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 Morphologica*. 2023, vol. 82, iss. 3, str. 449-456. ISSN 1644-3284. https://journals.viamedica.pl/fovia_morphologica/article/view/FM.a2022.0055/67031, DOI: 10.5603/FM.a2022.0055. [COBISS.SI-ID 154332163]
3. KOCBEK ŠAHERL, Lidija, RAKUŠA, Mateja. An anatomical description of the obturator region with clinical aspects. *Journal of the Anatomical Society of India*. 2022, vol. 71, iss. 3, str. 234-241. ISSN 2352-3050. <https://www.jasi.org.in/currentissue.asp?sabs=n>, DOI: [10.4103/JASI.JASI_134_20](https://doi.org/10.4103/JASI.JASI_134_20). [COBISS.SI-ID 127037699]