2025/2026

Univerza v Mariboru
Medicinska fakulteta

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Ortopedija
Course title:	Orthopaedics

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Splošna medicina, enovit magistrski študijski program		**Tretji**	**6.**
General medicine, Uniform master's degree study program		**Third**	**6th**

Vrsta predmeta (obvezni ali izbirni) / Course type (compulsory or elective)	obvezni compulsory
Univerzitetna koda predmeta / University course code:	

Predavanja Lectures	Seminar Seminar	Klin. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
15	**15**	**15**			**45**	**3**

Nosilec predmeta / Lecturer:	red. prof. dr. Matjaž Vogrin izr. prof. dr. Samo K. Fokter (sonosilec)

Jeziki / Languages:	**Predavanja / Lectures:**	**Slovenščina/Slovene**
	Vaje / Tutorial:	**Slovenščina/Slovene**

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

Vsebina:	**Content (Syllabus outline):**
Osnove zgradbe in delovanja mišično skeletnega sistema Osnove kliničnega pregleda Osnove stopenjske diagnostike pri ortopedskem bolniku Zdravljenje ortopedskih bolezni Prirojene in razvojne ortopedske bolezni Presnovne bolezni kosti Drža in hoja Vnetne bolezni gibal Degenerativne bolezni gibal Okvare živčno mišičnega sistema Tumorji gibal Motnje v krvnem obtoku Stanja po poškodbah Nujna stanja v ortopediji Športne poškodbe Specialni del: hrbtenica, kolk, koleno, gleženj, stopalo, rama, komolec, zapestje, roka	Basics of structure and function of the musculoskeletal system Basics methods of clinical examinations Basics of stage diagnostics in orthopaedic patient Treatment of orthopaedic diseases Congenital and developmental orthopaedic diseases Metabolic bone diseases Posture and walking Infectious diseases of locomotor system Degenerative diseases of locomotor system Neuromuscular disorders Tumors of locomotor system Blood flow disorders Posttraumatic disorders Emergency situations in orthopadics Sports injuries Special part: spine, hip, knee, ankle, foot, shoulder, elbow, wrist, hand

Temeljni literatura in viri / Readings:

UČBENIKI

1. Antolič V, Herman S, Pavlovčič V: Srakarjeva Ortopedija (II. izdaja), 2006.

2. Hamblen, David L: Adams's Outline of Orthopaedics., 14th ed., Edinburgh (etc.), 2010.

3. Miller MD, Thompson SR: Review of Orthopaedics (8th Edition). Elsevier, 2012.

4. Salter RB: Textbook of disorders and injuries of the muscoskeletal system: an introduction to orthopaedics, fractures and joint injuries, rheumatology, metabolic bone disease and rehabilitation, 3rd ed., Baltimore (etc.), 1999.

5. Staheli LT: Fundamentals of Pediatric Orthopedics. Wolters Kluwer Health, 2015.

6. Doral MN: Sports injuries. Springer, 2020.

7. Fokter SK: Recent advances in arthroplasty. InTech, 2012.

8. Fokter SK: Recent advances in hip and knee arthroplasty. InTech, 2012.

9. Recenzirani zborniki Mariborskega ortopedskega srečanja (od 2005 naprej)

Cilji in kompetence:

Cilj predmeta je usposobiti študente za samostojno delo z ortopedskimi bolniki.
Nivo predavanj, seminarjev in vaj bo zasnovan na realnih kliničnih primerih, s poudarkom na klinični uporabi teoretičnega znanja.
Izvedbo vaj bo potekala v tedenskih sklopih (3x5 ur). Vsaki skupini bo dodeljen stalni mentor. Pouk se bo pričel s seminarji, ki jih bodo pripravili študenti in ki bodo obravnavali posamezno vrsto problematike, za katero smatramo, da jo študenti morajo obvladati.
Vsebina je zasovana topografsko:
-hrbtenica
-kolk
-koleno
-rama
-nujna stanja
Študenti bodo najprej pripravili pregledni seminar o omenjeni problematik (1 ura). Sledil bo prikaz kliničnih primerov (pacientov). Študenti bodo opravili klinični pregled in anamnezo. Sledila bo diskusija z mentorjem, nato pa še prikaz pravilnega kliničnega pregleda, ter vaje le tega, ki jih bodo študenti opravili medsebojno (3 ure).
Cilj vaj in seminarjev je prikaz najpogostejših vrst patologije in obvladanje najpomebnejših diagnostičnih algoritmov in kliničnih testov za posamezne sklepe.

Objectives and competences:

The objective of the course is to prepare students for independent work with orthopedic patients.
The level of education will not be at sub specialist level. Instead it will be organized on real clinical cases with focus on clinical applications of theoretical knowledge.
Clinical exercises implementation will be held in weekly shifts (3x5 hours), with permanent mentors.
Course will start with seminar, prepared by students themselves, with topics, which must be mastered for any medical student. Contents will be organized topographically:
-spine
-hip
knee
-shoulder
-orthopedic emergency
After seminars hold by students (1 hour), mentors will demonstrate real clinical cases concerning daily topics. Students will take history of the patient, and also perform clinical examination. Discussion with mentor will follow, as well as demonstration or correct clinical examination, with practical work among students themselves (3 hours).
The goal of seminars and clinical exercises is demonstration of most important clinical algorithms and clinical test in orthopedic surgery.

Predvideni študijski rezultati:

Znanje in razumevanje: po zaključku tega predmeta bo študent/-ka sposoben/-a samostojno pristopiti k bolniku, se ustrezno sporazumevati z njim in s svojci, znal/-a bo vzeti anamnezo, pregledati bolnika in opredeliti predvidene diagnostične preiskave.

Intended learning outcomes:

Knowledge and Understanding: On completion of this course the student will be able to approach the patient independently, and communicate accordingly with the patient and his family members, he or she will take the history of illness, examine the patient, and evaluate the diagnostic methods to be applied.

Prenesljive/ključne spretnosti in drugi atributi: Študent/-ka se bo naučil/-a praktičnih veščin, potrebnih za delo z bolniki: klinični pregled in ocena ligamentarnega aparata sklepov, osnovni pregled hrbtenice vključno z osnovnim nevrološkim pregledom, osnovni postopki pri obravnavi urgentnih ortopedskih pacientov, pisanje receptov.	Transferable/Key Skills and other attributes: The student will acquire the necessary practical knowledge: clinical examination and evaluation of joint's ligament system, basic spine examination including basic neurological evaluation, treatment of urgent orthopaedic patients, making prescriptions.

Metode poučevanja in učenja:	**Learning and teaching methods:**
Predavanja Seminarji (obvezna 80 % prisotnost) Klinične vaje (obvezna 80 % prisotnost)	Lectures Seminars (obligatory) Clinical work with patients (obligatory)

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Način (pisni izpit, ustno izpraševanje, naloge, projekt):		Type (examination, oral, coursework, project):
Seminar (opravljen seminar je pogoj za pristop k pisnemu izpitu)		Coursework (completed coursework is a condition for entering the written examination)
Praktični izpit Pisni izpit	**30** **70**	Practical examination Written examination
Skupna ocena: 91–100 % = odlično (10) 81–90 % = prav dobro (9) 71–80 % = prav dobro (8) 61–70 % = dobro (7) 51–60 % = zadostno (6)		Total grade: 91 – 100% = excellent (10) 81 – 90% = very good(9) 71 – 80% = very good (8) 61 – 70% = good (7) 51 – 60% = satisfactory (6)
ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV Predavanja Seminarji (obvezna 80 % prisotnost) Klinične vaje (obvezna 80 % prisotnost)		ACADEMIC OBLIGATIONS OF STUDENTS Lectures Coursework (80% attendance obligatory) Clinical practice (80% attendance obligatory)
POGOJI ZA PRISTOP K POSAMEZNEMU PREVERJANJU ZNANJA Opravljen seminar in praktični izpit sta pogoja za pristop k pisnemu izpitu		REQUIREMENTS FOR ACCESS TO INDIVIDUAL KNOWLEDGE CHECKING Completed coursework is a requirement for access to the written exam

Reference nosilca / Lecturer's references:

Matjaž Vogrin

1. VOGRIN, Matjaž, NOVAK, Fiona, LIČEN, Teja, GREINER, Nina, MIKL, Samo, KALC, Miloš. Acute effects of tissue flossing on ankle range of motion and tensiomyography parameters. *Journal of sport rehabilitation*. 2021, vol. 30, issue 1, str. 129-135, ilustr. ISSN 1543-3072. https://doi.org/10.1123/jsr.2019-0160, https://journals.humankinetics.com/view/journals/jsr/aop/article-10.1123-jsr.2019-0160/article-10.1123-jsr.2019-0160.xml, DOI: 10.1123/jsr.2019-0160. [COBISS.SI-ID 6993215], [JCR, SNIP, WoS do 13. 11. 2022: št. citatov (TC): 8, čistih citatov (CI): 6, čistih citatov na avtorja (CIAu): 1,00, Scopus do 16. 10. 2022: št. citatov (TC): 6, čistih citatov (CI): 6, čistih citatov na avtorja (CIAu): 1,00]

2. VOGRIN, Matjaž, KALC, Miloš, LIČEN, Teja. Acute effects of tissue flossing around the upper thigh on neuromuscular performance : a study using different degrees of wrapping pressure. *Journal of sport rehabilitation*. May 2021, vol. 30, issue 4, str. 601-608, ilustr. ISSN 1543-3072. https://journals.humankinetics.com/view/journals/jsr/aop/article-10.1123-jsr.2020-0105/article-10.1123-jsr.2020-0105.xml, DOI: 10.1123/jsr.2020-0105. [COBISS.SI-ID 42955779], [JCR, SNIP, WoS do 25. 2. 2023: št. citatov (TC): 8, čistih citatov (CI): 7, čistih citatov na avtorja (CIAu): 2,33]

3. VOGRIN, Matjaž, LIČEN, Teja, GREINER, Nina, KALC, Miloš. Peak torque comparison between SMM iMoment in Biodex System Pro 4 isokinetic dynamometers = Primerjava največjega navora med izokinetičnima dinamometroma SMM iMoment in Biodex System Pro 4. *Acta medico-biotechnica : AMB*. [Tiskana izd.]. 2020, vol. 13, [no.] 2, str. 46-54, ilustr. ISSN 1855-5640. https://journals.um.si/index.php/amb/article/view/1445, https://dk.um.si/IzpisGradiva.php?id=83684, http://www.dlib.si/details/URN:NBN:SI:doc-GF9EUZSY, https://dk.um.si/IzpisGradiva.php?id=83684, DOI: 10.18690/actabiomed.204. [COBISS.SI-ID 44144899]

4. VOGRIN, Matjaž, TROJNER, Teodor, KELC, Robi. Artificial intelligence in musculoskeletal oncological radiology. *Radiology and oncology*. [Print ed.]. 2021, vol. 55, no. 1, str. 1-6, ilustr. ISSN 1318-2099. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7877260/, http://www.dlib.si/details/URN:NBN:SI:doc-M8EIWZBJ, DOI: 10.2478/raon-2020-0068. [COBISS.SI-ID 36718595], [JCR, SNIP, WoS do 7. 4. 2023: št. citatov (TC): 10, čistih citatov (CI): 10, čistih citatov na avtorja (CIAu): 3,33, Scopus do 20. 12. 2022: št. citatov (TC): 11, čistih citatov (CI): 11, čistih citatov na avtorja (CIAu): 3,67]

5. VOGRIN, Matjaž, LIČEN, Teja, KLJAIĆ-DUJIĆ, Milka. Ischiofemoral impingement syndrome : an overview for strength and conditioning professionals. *Strength and conditioning journal*. Feb. 2021, vol. 43, no. 1, str. 63-71, ilustr. ISSN 1533-4295. https://journals.lww.com/nsca-scj/Abstract/9000/Ischiofemoral_Impingement_Syndrome__An_Overview.99255.aspx, DOI: 10.1519/SSC.0000000000000568. [COBISS.SI-ID 17874435], [JCR, SNIP, WoS]

Samo K. Fokter

1. FOKTER, Samo K., ZAJC, Jan, MERC, Matjaž. Interchangeable neck failures of bi-modular femoral stems in primary total hip arthroplasty cannot be predicted from serum trace element analysis. International orthopaedics. Apr. 2021, vol. 45, issue 4, str. 877-881, ilustr. ISSN 1432-5195. https://link.springer.com/article/10.1007%2Fs00264-020-04812-6, https://doi.org/10.1007/s00264-020-04812-6, DOI: 10.1007/s00264-020-04812-6. [COBISS.SI-ID 29172995], [JCR, SNIP, WoS do 26. 4. 2022: št. citatov (TC): 3, čistih citatov (CI): 0, čistih citatov na avtorja (CIAu): 0,00, Scopus do 20. 2. 2023: št. citatov (TC): 2, čistih citatov (CI): 1, čistih citatov na avtorja (CIAu): 0,33]

financer: Univerzitetni klinični center Maribor, IRP-2017/01-01, SI

2. FOKTER, Samo K., GUBELJAK, Nenad, PREDAN, Jožef, SEVŠEK, Jure, ZAJC, Jan, KRAJNC, Zmago. Bilateral neck fracture in bimodular femoral stem after primary total hip arthroplasty: a case report. BMC musculoskeletal disorders. [Online ed.]. 2021, vol. 22, str. [1]-7, ilustr. ISSN 1471-2474. https://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/s12891-021-04210-y, https://doi.org/10.1186/s12891-021-04210-y, DOI: 10.1186/s12891-021-04210-y. [COBISS.SI-ID 60452611], [JCR, SNIP, WoS do 26. 6. 2021: št. citatov (TC): 1, čistih citatov (CI): 0, čistih citatov na avtorja (CIAu): 0,00, Scopus do 1. 9. 2021: št. citatov (TC): 1, čistih citatov na avtorja (CIAu): 0,00]

financer: ARRS, Programi, P2-0137, SI, Numerična in eksperimentalna analiza nelinearnih mehanskih sistemov

3. FOKTER, Samo K., GUBELJAK, Nenad, PUNZÓN QUIJORNA, Esther, PELICON, Primož, KELEMEN, Mitja, VAVPETIČ, Primož, PREDAN, Jožef, FERLIČ, Luka, NOVAK, Igor. Total Knee replacement with an uncemented porous tantalum tibia component: A failure analysis. Materials. Mar. 2022, vol. 15, iss. 7 (2575), 13 str. ISSN 1996-1944. DOI: 10.3390/ma15072575. [COBISS.SI-ID 103785475], [JCR, SNIP, WoS do 19. 8. 2022: št. citatov (TC): 1, čistih citatov (CI): 1, čistih citatov na avtorja (CIAu): 0,11, Scopus do 3. 8. 2022: št. citatov (TC): 1, čistih citatov (CI): 1, čistih citatov na avtorja (CIAu): 0,11]

4. FOKTER, Samo K., KUHTA, Matevž, HOJNIK, Marko, LEDINEK, Živa, KOSTANJŠEK, Rok. Tissue integration of calcium phosphate compound after subchondroplasty : 4-year follow-up in a 76-year-old female patient. Bioengineering. 2023, vol. 10, issue 2, [article no.] 208, str. [1]-12, ilustr. ISSN 2306-5354. https://www.mdpi.com/2306-5354/10/2/208, https://doi.org/10.3390/bioengineering10020208, DOI: 10.3390/bioengineering10020208. [COBISS.SI-ID 141341955], [JCR, SNIP, WoS, Scopus]

financer: Mikro-CT analizo je financirala Javna agencija za raziskovalno dejavnost Republike Slovenije (Infrastrukturni center za mikroskopijo bioloških vzorcev, MRIC UL, I0-0022-0481-08) na Biotehniški fakulteti Univerze v Ljubljani,

Slovenija

5. FOKTER, Samo K., NOČ, Nejc, LEVAŠIČ, Vesna, HANC, Marko, ZAJC, Jan. Dual-modular versus single-modular stems for primary total hip arthroplasty: a long-term survival analysis. Medicina. 2023, vol. 59, issue 2, [article no.] 290, str. [1]-10, ilustr. ISSN 1648-9144. https://www.mdpi.com/1648-9144/59/2/290, https://doi.org/10.3390/medicina59020290, DOI: 10.3390/medicina59020290. [COBISS.SI-ID 141004291], [JCR, SNIP, WoS, Scopus]