



Univerza v Mariboru

Medicinska fakulteta

## UČNI NAČRT PREDMETA / COURSE SYLLABUS

|                      |                           |
|----------------------|---------------------------|
| <b>Predmet:</b>      | <b>Medicina in šport</b>  |
| <b>Course title:</b> | <b>Medicine and Sport</b> |

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

Vrsta predmeta / Course type

Izbirni/Elective

Univerzitetna koda predmeta / University course code:

| Predavanja<br>Lectures | Seminar<br>Seminar | Vaje<br>Tutorial | Klinične vaje<br>Clinical training | Druge oblike<br>študija<br>Other forms of<br>study | Samost. delo<br>Individual work | ECTS |
|------------------------|--------------------|------------------|------------------------------------|----------------------------------------------------|---------------------------------|------|
| 25                     |                    | 20               |                                    |                                                    | 45                              | 3    |

Nosilec predmeta / Lecturer:

Red. prof. dr. Matjaž VOGRIN

Jeziki /

Predavanja / Lectures:

slovenščina/slovene

Languages:

Vaje / Tutorial:

slovenščina/slovene

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

Prerequisites:

Vsebina:

Content (Syllabus outline):

1. Uvod v fiziologijo športa
2. Uvod v patofiziologijo športa
3. Športna prehrana
4. Biomehanske obremenitve pri športu
5. Poškodbe glave in obraznih kosti, pretres možganov
6. Poškodbe ustne votline, zob, nosu in obnosnih votlin
7. Osnove športnih poškodb pri različnih športih (košarka, odbojka, tenis, smučanje)
8. Principi zdravljenja športnih poškodb
9. Preventivne mere za preprečevanje športnih poškodb (ortopedski pripomočki, obutev, ogrevanje)
10. Praktični del

1. Introduction to sport physiology
2. Introduction to sport pathophysiology
3. Sport nutrition
4. Biomechanical load in sports
5. Head and face injuries, concussion
6. Injuries of mouth cavity, nose and paranasal cavities
7. Basic sport injuries in various sports (basketball, volleyball, tennis, skiing)
8. Principles of treatment of sport injuries
9. Preventive measures in preventing sport injuries (orthopedic tools, footwear, warm-up)
10. Practical part

Temeljni literatura in viri / Readings:

1. Wilmore Jack in Costill David, Physiology of Sport and Exercise, Human Kinetics Publishers;4. izd., 2008
2. Čajevec Rudi, Medicina športa: (priročnik). Celje 20010.
3. Patnana Arun K. in Kanchan Tanuj, Tooth Fracture. Treasure Island (FL) StatPearls Publishing, 2023

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| <b>Cilji in kompetence:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Objectives and competences:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Razvijati sposobnost vzdržljivosti z različnimi oblikami aktivnosti s pomočjo merilcev srčnega utripa, ugotavljati in spremljati lastne funkcionalne in telesne značilnosti v daljšem časovnem obdobju in jih primerno ovrednotiti.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Developing endurance ability by performing different forms of activities and using pulse timer, determine and observe and properly evaluate own functional and bodily characteristics in a longer time period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Predvideni študijski rezultati:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Intended learning outcomes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p>Znanje in razumevanje:</p> <p>Študent bo pri predmetu poleg teoretičnih osnov fiziologije in patofiziologije športa pridobil naslednja znanja in razumevanje:</p> <ol style="list-style-type: none"> <li>1. o biomehanskih obremenitvah pri različnih športih v ramenih, hrbtenici, kolkah, kolenih in gležnjih.</li> <li>2. o najpogostejših poškodbah, ki nastajajo pri različnih športih, brahiovertebralnimi sindromi, peritendinitičnimi spremembami v ramenih in komolcih, karpalnih tunelih v zapestju, vertebrogenimi in vertebralnimi sindromi hrbtenice, degenerativnimi procesi kolena in gležnja, zvini in nategi v velikih sklepih.</li> <li>3. o osnovnih principih pristopa h poškodbi, imobilizacijah, nujnih ukrepih, lokalni terapiji, fizikalni terapiji in rehabilitacijskih postopkih pri športnih poškodbah.</li> <li>4. o možnih preventivnih ukrepih za preprečitev športnih poškodb (nošnja ortopedskih pripomočkov, pravilna obutev, segrevanje itd).</li> </ol> <p>V praktičnem delu bo pridobil naslednja znanja in razumevanje:</p> <ol style="list-style-type: none"> <li>1. vpliv športne vadbe na zdravje in dobro počutje</li> <li>2. odziv organizma na napor in prilagoditve na različne oblike vadbe</li> <li>3. dejavniki tveganja pri telesni vadbi</li> <li>4. primerna prehrana pri športnih aktivnostih, hidracija in uporaba mikronutrientov</li> <li>5. preventivna vloga športa v ozaveščanju proti različnim oblikam zasvojenosti in drugim patološkim pojavom sodobne družbe (nasilje, samomorilstvo)</li> <li>6. pomen športa v rehabilitaciji.</li> </ol> | <p>Knowledge and understanding:</p> <p>In addition to basic theoretical knowledge about the physiology and pathophysiology of sports, student shall master the following knowledge and understanding:</p> <ol style="list-style-type: none"> <li>1. biomechanical load in different sport disciplines (shoulder, spine, hips and ankles)</li> <li>2. most common trauma in performing different sport activities.</li> <li>3. basic principles of assessing trauma, immobilization, local therapy, physical therapy and rehabilitation.</li> <li>4. preventive care to prevent sport trauma (orthopedic tools, footwear, warm-up)</li> </ol> <p>In the practical part student shall master the following knowledge and understanding:</p> <ol style="list-style-type: none"> <li>1. influence of sports exercise on the health and wellbeing</li> <li>2. reaction of the organism to the stress and adjustment to various forms of exercise</li> <li>3. risk factors in sport activity</li> <li>4. suitable diet for various forms of sports activities, hydration and usage of micronutrients</li> <li>5. preventive role of sports in educating about various forms of addiction and other pathological happenings of the modern society (violence, suicide).</li> <li>6. role of sports for rehabilitation.</li> </ol> |
| <b>Metode poučevanja in učenja:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Learning and teaching methods:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Predavanja<br>Vaje                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Lectures<br>Tutorial                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Načini ocenjevanja:

Delež (v %) /  
Weight (in %)

## Assessment:

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| Način (pisni izpit, ustno izpraševanje, naloge, projekt)<br>ustni<br>in<br>pisni izpit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 50 %<br><br>50 % | Type (examination, oral, coursework, project):<br><br>oral<br>and<br>written exam                                                                      |
| ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV:<br>80% prisotnost na predavanjih                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                  | ACADEMIC OBLIGATIONS OF STUDENTS:<br>80% attendance at lectures                                                                                        |
| POGOJI ZA PRISTOP K POSAMEZNEMU<br>PREVERJANJU ZNANJA:<br>Opravljen sklop vaj pod mentorstvom<br>profesorja telesne vzgoje                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  | REQUIREMENTS FOR ACCESS TO INDIVIDUAL<br>KNOWLEDGE CHECKING:<br>Completed set of exercises under the mentoring<br>of a professor of physical education |
| <b>Reference nosilca / Lecturer's references:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                                                                                                                                        |
| <p>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. <i>Journal of sport rehabilitation</i>. 2021, vol. 30, issue 1, str. 129-135, ilustr. ISSN 1543-3072. <a href="https://doi.org/10.1123/jsr.2019-0160">https://doi.org/10.1123/jsr.2019-0160</a>, <a href="https://journals.humankinetics.com/view/journals/jsr/aop/article-10.1123-jsr.2019-0160/article-10.1123-jsr.2019-0160.xml">https://journals.humankinetics.com/view/journals/jsr/aop/article-10.1123-jsr.2019-0160/article-10.1123-jsr.2019-0160.xml</a>, DOI: <a href="https://doi.org/10.1123/jsr.2019-0160">10.1123/jsr.2019-0160</a>. [COBISS.SI-ID <a href="#">6993215</a>], [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]</p> <p>2. VOGRIIN, 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. <i>Journal of sport rehabilitation</i>. May 2021, vol. 30, issue 4, str. 601-608, ilustr. ISSN 1543-3072. <a href="https://journals.humankinetics.com/view/journals/jsr/aop/article-10.1123-jsr.2020-0105/article-10.1123-jsr.2020-0105.xml">https://journals.humankinetics.com/view/journals/jsr/aop/article-10.1123-jsr.2020-0105/article-10.1123-jsr.2020-0105.xml</a>, DOI: <a href="https://doi.org/10.1123/jsr.2020-0105">10.1123/jsr.2020-0105</a>. [COBISS.SI-ID <a href="#">42955779</a>], [JCR, SNIP, WoS do 25. 2. 2023: št. citatov (TC): 8, čistih citatov (CI): 7, čistih citatov na avtorja (CIAu): 2,33]</p> <p>3. VOGRIIN, 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. <i>Acta medico-biotechnica : AMB</i>. [Tiskana izd.]. 2020, vol. 13, [no.] 2, str. 46-54, ilustr. ISSN 1855-5640. <a href="https://journals.um.si/index.php/amb/article/view/1445">https://journals.um.si/index.php/amb/article/view/1445</a>, <a href="https://dk.um.si/IzpisGradiva.php?id=83684">https://dk.um.si/IzpisGradiva.php?id=83684</a>, <a href="http://www.dlib.si/details/URN:NBN:SI:doc-GF9EUZSY">http://www.dlib.si/details/URN:NBN:SI:doc-GF9EUZSY</a>, <a href="https://dk.um.si/IzpisGradiva.php?id=83684">https://dk.um.si/IzpisGradiva.php?id=83684</a>, DOI: <a href="https://doi.org/10.18690/actabiomed.204">10.18690/actabiomed.204</a>. [COBISS.SI-ID <a href="#">44144899</a>]</p> <p>4. VOGRIIN, Matjaž, TROJNER, Teodor, KELC, Robi. Artificial intelligence in musculoskeletal oncological radiology. <i>Radiology and oncology</i>. [Print ed.]. 2021, vol. 55, no. 1, str. 1-6, ilustr. ISSN 1318-2099. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7877260/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7877260/</a>, <a href="http://www.dlib.si/details/URN:NBN:SI:doc-M8EIWZBJ">http://www.dlib.si/details/URN:NBN:SI:doc-M8EIWZBJ</a>, DOI: <a href="https://doi.org/10.2478/raon-2020-0068">10.2478/raon-2020-0068</a>. [COBISS.SI-ID <a href="#">36718595</a>], [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]</p> <p>5. VOGRIIN, Matjaž, LIČEN, Teja, KLJAIĆ-DUJIĆ, Milka. Ischiofemoral impingement syndrome : an overview for strength and conditioning professionals. <i>Strength and conditioning journal</i>. Feb. 2021, vol. 43, no. 1, str. 63-71, ilustr. ISSN 1533-4295. <a href="https://journals.lww.com/nsca-sci/Abstract/9000/Ischiofemoral_Impingement_Syndrome_An_Overview.99255.aspx">https://journals.lww.com/nsca-sci/Abstract/9000/Ischiofemoral_Impingement_Syndrome_An_Overview.99255.aspx</a>, DOI: <a href="https://doi.org/10.1519/SSC.0000000000000568">10.1519/SSC.0000000000000568</a>. [COBISS.SI-ID <a href="#">17874435</a>], [JCR, SNIP, WoS]</p> |                  |                                                                                                                                                        |