Medicinski fakultet u Rijeci

IZVEDBENI NASTAVNI PLAN
2026/2027

Za kolegij

Physical and Rehabilitation Medicine

Studij:	**Medical Studies in English (R)** Sveučilišni integrirani prijediplomski i diplomski studij
Katedra:	**Katedra za fizikalnu medicinu i rehabilitaciju**
Nositelj kolegija:	**prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med.**
Godina studija:	**5**
ECTS:	**2**
Stimulativni ECTS:	**0 (0.00%)**
Strani jezik:	**Mogućnost izvođenja na stranom jeziku**

Podaci o kolegiju:

Physical and Rehabilitation Medicine is compulsory course on 5th year of study. It consists of 22 lectures and 15 practical hours (2ECTS). Lectures will be held online/in vivo. Practicals will be organized in 3 bloks (5 practical teaching ours each) at two locations of Department for Physical and Rehabilitation Medicine, KBC Rijeka for each group of students, according to the schedule: - Location Sušak, T. Strižića 3, Rijeka. - Location Kantrida, Istarska street 43, Kantrida Children¨s hospital, Rijeka. In the case of the unfavorable epidemiological situation educational process will be held online.

Learning outcomes: At the end of the course students should be able to:
• recognize major functional disorders of musculoskeletal system
• understand the impact of chronic illness on functioning
• define impairment, disability and handicap
• differentiate disease and consequences of disease on personal and society level
• indicate goal of the rehabilitation process
• name the members of rehabilitation team and their role in rehabilitation process
• describe mechanism of action and indication of particular physical agent

Popis obvezne ispitne literature:

Selected chapters from:
1. David X. Cifu, et al., Braddom’s Physical Medicine and Rehabilitation, 5th ed., Philadelphia, PA, 2016.
2. Prof. Walter R. Frontera MD PhD, DeLisas Physical Medicine and Rehabilitation Principles and Practice, Two Volume Set (Rehabilitation Medicine-Delisa)., 5th ed., Philadelphia, PA, 2016.
3. Matthew Shatzer., Physical Medicine and Rehabilitation Pocketpedia. 3rd ed., New York, 2018.
4. Thomas D. Rizzo Jr., Essentials of Physical Medicine and Rehabilitation Musculoskeletal Disorders, Pain, and Rehabilitation., 4th ed., Philadelphia, Pa, 2019.

5. PHYSICAL AND REHABILITATION MEDICINE for Medical Students. Maria Gabriella Ceravolo - Nicolas Christodoulou (Editors); Franco Franchignoni - Nikolaos Barotsis (Project Managers); Copyright 2018 Edi.Ermes - Milan (Italy)
ISBN 978-88-7051-636-4 - Digital edition

Popis dopunske literature:

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Način polaganja ispita:

Final exam consists of obligatory written exam on-site in the form of essay.

Nastavni plan:

Predavanja popis (s naslovima i pojašnjenjem):

L1. Introduction and history of Physical Medicine and Reahabilitation (PRM)

Get acquainted with the major goal of PRM. Acquireing knowledge about history of PRM

L2. Helping the patient with musculo-skeletal diseases (MSD)

Get acquainted with basics in anamnesis, clinical examination, diagnostics and therapy in MSD

L3 i L4. Pain- diagnostic and therapeutic challenge

Describe and explain types of pain in MSD. Knowing basic principles in non-farmacologic and pharmacologicph pain therapy

L5. Selected clinical cases – Please help me, my whole body hurts- Fibromyalgia syndrom

Describe and explain acute and chronic pain stimulus as well as red and yellow flags. Get acquainted with nociceptive and neuropathic pain Knowing basics in Fibromialgia sy.

L6. Selected clinical cases – Complex Regional Pain Syndrom (CRPS)

Describe and explain CRPS origin. Recognize and determine CRPS diagnostics and therapy

L7. i L8. Osteoporosis and osteosarcopenia

Describe and explain origin of osteoporosis and osteosarcopenia. Recognize and determine diagnostics and therapy in osteoporosis and osteosarcopenia

L9. i L10. Phenotype diversity in joint and spine osteoarthritis (OA) with proper diagnostics and nonpharmacologic and pharmacologic therapy

Describe and explain phenotype diversity in OA. Recognize and determine diagnostics and therapy in OA. Determine basics in rehabilitation protocols.

L11. Neck pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies)

Describe and explain causes of neck pain. Recognize and determine diagnostics and therapy in neck pain. Determine basics in rehabilitation protocols

L12 i L13. Back pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies), recognizing inflammatory back pain as a spetial entity

Describe and explain causes of back pain. Recognize and determine diagnostics and therapy in back pain. Determine basics in rehabilitation protocols. Recognize and determine differences in inflammatory/mechanical back pain

L14. Knee pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies

Describe and explain causes of knee pain. Recognize and determine diagnostics and therapy in knee pain. Determine basics in rehabilitation protocols.

L15. Tendinopathies - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies

Describe and explain causes of tendinopathies. Recognize and determine diagnostics and therapy in tendinopathies. Determine basics in rehabilitation protocols.

L16. i L17. Selected rehabilitation issues: Spinal cord Injuries (SCI) – how to make individual rehabilitation plan for impairments, disability and handicap

Describe how to create individual rehabilitation plan for SCI patient. Recognize and determine levels of SCI injury. Determine basics in isolving impairments, disability and handicap.

L18. Selected rehabilitation issues: Rehabilitation of people with limb amputation - how to make

individual rehabilitation plan for impairments, disability and handicap

Describe how to create individual rehabilitation plan for limb amputees Recognize and determine prosthetic restoration Determine basics in isolving impairments, disability and handicap

L19. Selected rehabilitation issues: Rehabilitation in stroke syndroms- how to make individual rehabilitation plan for impairments, disability and handicap

Learning outcomes Describe how to create individual rehabilitation plan for patients with stroke syndroms Recognize and determine rehabilitation of stroke-related impairment and disability Determine basics in isolving impairments, disability and handicap (levels of rehabilitation care and specilized ecquipment)

L20. Selected rehabilitation issues: Comprehensiive management of multiple sclerosis.

Describe how to create individual rehabilitation plan for patients with multiple sclerosis. Recognize and determine rehabilitation basics in isolving impairments, disability and handicap (levels of rehabilitation care and specilized ecquipment).

L21. i L22. Selected rehabilitation issues: Early diagnosis and habilitation/neurorehabilitation of children with deviation of normal motor development.

Describe and recognize basics in deviation of normal motor development in children. Describe individual rehabilitation plan for patients with cerebral palsy. Recognize and determine rehabilitation basics in isolving impairments, disability and handicap (levels of rehabilitation care and specilized ecquipment).

Vježbe popis (s naslovima i pojašnjenjem):

Practical 1 - 5

Assessment of musculo-skeletal system, create individual rehabilitation plan for patients with impairments, disability and handicap; levels of non-pharmacologic and parmacologic opptions; levels of rehabilitation care through inpatient/outpatient department. Practicals will be held at Department for Physical and Rehabilitation Medicine, KBC Rijeka - Location Sušak, T. Strižića 3, Rijeka (2x5 teaching practical ours each group - pathologies and rehabilitation strategies in elderly patients.

Practical 6-10

Assessment of musculo-skeletal system, create individual rehabilitation plan for patients with impairments, disability and handicap; levels of non-pharmacologic and parmacologic opptions; levels of rehabilitation care through inpatient/outpatient department. Practicals will be held at Department for Physical and Rehabilitation Medicine, KBC Rijeka - Location Sušak, T. Strižića 3, Rijeka (2x5 teaching practical ours each group - pathologies and rehabilitation strategies in elderly patients.

11-15

Assessment of musculo-skeletal system, create individual rehabilitation plan for patients with impairments, disability and handicap; levels of non-pharmacologic and parmacologic opptions; levels of rehabilitation care through inpatient/outpatient department. Practicals will be held at Department for Physical and Rehabilitation Medicine, KBC Rijeka - Location Kantrida, Istarska street 43, Kantrida Children¨s hospital, Rijeka (5 teaching practical ours each group-pathologies and rehabilitation strategies in children).

Obveze studenata:

Attendance on lectures and practicals is mandatory. Communication between the teaching stuff and students will take place by e-mail addresses (@uniri.hr)

Ispit (način polaganja ispita, opis pisanog/usmenog/praktičnog dijela ispita, način bodovanja, kriterij ocjenjivanja):

Student assessment is carried out in accordance with the current University of Rijeka Study Regulations and the Student Regulations at the Faculty of Medicine Rijeka (adopted by the Faculty Council of the Faculty of Medicine Rijeka). Students' performance will be evaluated during the course and at the final exam. Out of a total of 100 credits, a student can earn 50 credits (50%) during the course, and 50 credits (50%) at the final exam. Student assessment is performed using ECTS (A-F) and number system (1-5). Student assessments in ECTS system is carried out by is performed by absolute distribution, and according to graduate assessment criteria. Out of a total of 50 credits that can be earn during the course, student must earn 25 credits to take final exam.

The student acquires grade points by completing the tasks as follows I. During the course (maximum 50 credits): **Lectures attendance 10 credits.** Obligatory practical test (maximum 40 credits) During the course students must take obligatory practical test (range 20-40 maximum) in musculoskeletal examination and in providing individual rehabilitation plan. The obligatory practical test will be held on the last block of practicals (after 2nd and 3rd block). **During the each obligatory practical test** teacher grades knowledge and skills of each student as follows: sufficient 10 credits; good 13; very good 18; excellent 20.

II. **Final exam (maximum 50 credits)**: Final exam consists of obligatory written exam on-site in the form of essay. Student who earn 25 or more credits during the course can take final exam. Student who earn less than 25 credits during the course cannot take final exam. Final exam is scored maximal up to 50 credits. Final exam consists of 10 questions and brings 50 credits (range 25-50). To earn the credits student must pass 50% of final test. Correct answers are converted in credits by the following criteria: sufficient 25-34 credits; good 35-40; very good 41-45; excellent 46-50.

For a passing grade during classes and on the final exam, student has to obtain minimum of 75 credits. The ECTS grading system is defined by the following criteria: A (5) – 96 -100% credits B (4)– 80 - 95% credits C (3) – 60 - 79% credits D (2) -- 50 - 59% credits F (1) – 0 - 49,9% credits Grades in ECTS grading system are converted in numerical system by the following criteria: A = excellent (5) B = very good (4) C = good (3) D = sufficient (2) F = insufficient (1)

Ostale napomene (vezane uz kolegij) važne za studente:

Course content and all information related to the course as well as exam dates can be found on the MedRi web pages. All student inquiries, regarding the course and possible problems, remarks and inquiries are provided exclusively using the official e-mail addresses (@medri.uniri.hr). It is possible to arrange consultations with the teaching staff during working hours.

SATNICA IZVOĐENJA NASTAVE 2026/2027

Physical and Rehabilitation Medicine

Predavanja (mjesto i vrijeme / grupa)	**Vježbe** (mjesto i vrijeme / grupa)
22.02.2027	

L1. Introduction and history of Physical Medicine and Reahabilitation (PRM):
• P12 - KBC SUŠAK (12:00 - 16:00) [157]
  ○ PARM
 	
L2. Helping the patient with musculo-skeletal diseases (MSD):
• P12 - KBC SUŠAK (12:00 - 16:00) [157]
  ○ PARM
 	
L3 i L4. Pain- diagnostic and therapeutic challenge:
• P12 - KBC SUŠAK (12:00 - 16:00) [157]
  ○ PARM	

prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med. [157]	
23.02.2027	

	Practical 1 - 5:
	• fizikalna - KBC Sušak (08:00 - 12:00) [1165] [1944] [1945]
	  ○ PRM C1
	  ○ PRM C4
	  ○ PRM C3
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [1946]
	  ○ PRM C2

naslovna asistentica Tomić Antonela, dr.med. [1165] · naslovni asistent Vido Krešimir, dr. med. [1945] · naslovni asistent Zahirović Nino, dr. med. [1944] · naslovna asistentica Šarić Katarina, dr. med. [1946]	
24.02.2027	

L5. Selected clinical cases – Please help me, my whole body hurts- Fibromyalgia syndrom:
• P12 - KBC SUŠAK (08:00 - 12:00) [157]
  ○ PARM
 	
L6. Selected clinical cases – Complex Regional Pain Syndrom (CRPS):
• P12 - KBC SUŠAK (08:00 - 12:00) [157]
  ○ PARM
 	
L9. i L10. Phenotype diversity in joint and spine osteoarthritis (OA) with proper diagnostics and nonpharmacologic and pharmacologic therapy:
• P12 - KBC SUŠAK (08:00 - 12:00) [157]
  ○ PARM	

prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med. [157]	
25.02.2027	

	Practical 1 - 5:
	• fizikalna - KBC Sušak (08:00 - 12:00) [480] [1944] [1945] [1165]
	  ◦ PRM D1
	  ◦ PRM A4
	  ◦ PRM A3
	  ◦ PRM A1
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [1946]
	  ◦ PRM A2

naslovna asistentica Tomić Antonela, dr.med. [1165] · naslovni asistent Vido Krešimir, dr. med. [1945] · naslovni asistent Zahirović Nino, dr. med. [1944] · naslovna asistentica Šarić Katarina, dr. med. [1946] · naslovni asistent Šegota Adelmo, dr. med. [480]	
26.02.2027	

L7. i L8. Osteoporosis and osteosarcopenia:
• P12 - KBC SUŠAK (11:00 - 15:00) [157]
  ◦ PARM
 	
L14. Knee pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies:
• P12 - KBC SUŠAK (11:00 - 15:00) [157]
  ◦ PARM
 	
L15. Tendinopathies - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies:
• P12 - KBC SUŠAK (11:00 - 15:00) [157]
  ◦ PARM	

prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med. [157]	
01.03.2027	

	Practical 1 - 5:
	• fizikalna - KBC Sušak (08:00 - 12:00) [1236] [480] [1165]
	  ◦ PRM B4
	  ◦ PRM B3
	  ◦ PRM B1
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [1945] [1946]
	  ◦ PRM D2
	  ◦ PRM B2

naslovna asistentica Tomić Antonela, dr.med. [1165] · naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovna asistentica Šarić Katarina, dr. med. [1946] · naslovni asistent Šegota Adelmo, dr. med. [480]	
02.03.2027	

L11. Neck pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies):
• P12 - KBC SUŠAK (08:00 - 11:00) [157]
  ◦ PARM
 	
L12 i L13. Back pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies), recognizing inflammatory back pain as a spetial entity:
• P12 - KBC SUŠAK (08:00 - 11:00) [157]
  ◦ PARM	

prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med. [157]	
03.03.2027	

	Practical 6-10:
	• fizikalna - KBC Sušak (08:00 - 12:00) [1165] [1236]
	  ◦ PRM C2
	  ◦ PRM C3
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [1945] [1946]
	  ◦ PRM C1
	  ◦ PRM C4

naslovna asistentica Tomić Antonela, dr.med. [1165] · naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovna asistentica Šarić Katarina, dr. med. [1946]	
04.03.2027	

L16. i L17. Selected rehabilitation issues: Spinal cord Injuries (SCI) – how to make individual rehabilitation plan for impairments, disability and handicap:
• P12 - KBC SUŠAK (08:00 - 12:00) [157]
  ◦ PARM
 	
L18. Selected rehabilitation issues: Rehabilitation of people with limb amputation - how to make individual rehabilitation plan for impairments, disability and handicap:
• P12 - KBC SUŠAK (08:00 - 12:00) [157]
  ◦ PARM
 	
L19. Selected rehabilitation issues: Rehabilitation in stroke syndroms- how to make individual rehabilitation plan for impairments, disability and handicap:
• P12 - KBC SUŠAK (08:00 - 12:00) [157]
  ◦ PARM	

prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med. [157]	
05.03.2027	

	Practical 6-10:
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [1945] [1946]
	  ◦ PRM A1
	  ◦ PRM D1
	• fizikalna - KBC Sušak (08:00 - 12:00) [1165] [480] [1236]
	  ◦ PRM A2
	  ◦ PRM A3
	  ◦ PRM A4

naslovna asistentica Tomić Antonela, dr.med. [1165] · naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovna asistentica Šarić Katarina, dr. med. [1946] · naslovni asistent Šegota Adelmo, dr. med. [480]	
08.03.2027	

L20. Selected rehabilitation issues: Comprehensiive management of multiple sclerosis.:
• P12 - KBC SUŠAK (08:00 - 11:00) [157]
  ◦ PARM
 	
L21. i L22. Selected rehabilitation issues: Early diagnosis and habilitation/neurorehabilitation of children with deviation of normal motor development.:
• P12 - KBC SUŠAK (08:00 - 11:00) [157]
  ◦ PARM	

prof. dr. sc. Schnurrer-Luke-Vrbanić Tea, dr. med. [157]	
09.03.2027	

	Practical 6-10:
	• fizikalna - KBC Sušak (08:00 - 12:00) [1944] [480] [1945] [1236] [1165]
	  ◦ PRM D2
	  ◦ PRM B2
	  ◦ PRM B3
	  ◦ PRM B4
	  ◦ PRM D2
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [2840]
	  ◦ PRM B1

naslovna asistentica Tomić Antonela, dr.med. [1165] · naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovni asistent Zahirović Nino, dr. med. [1944] · naslovni asistent Šegota Adelmo, dr. med. [480] · naslovni asistent Štefanac Davor, dr.med. [2840]	
10.03.2027	

	11-15:
	• fizikalna - KBC Sušak (08:00 - 12:00) [1944] [1236] [1945]
	  ◦ PRM C1
	  ◦ PRM C2
	  ◦ PRM C4
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [2840]
	  ◦ PRM C3

naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovni asistent Zahirović Nino, dr. med. [1944] · naslovni asistent Štefanac Davor, dr.med. [2840]	
11.03.2027	

	11-15:
	• fizikalna - KBC Sušak (08:00 - 12:00) [1236] [1944] [1945]
	  ◦ PRM A2
	  ◦ PRM D1
	  ◦ PRM A1
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [2840] [1946]
	  ◦ PRM A3
	  ◦ PRM A4

naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovni asistent Zahirović Nino, dr. med. [1944] · naslovna asistentica Šarić Katarina, dr. med. [1946] · naslovni asistent Štefanac Davor, dr.med. [2840]	
12.03.2027	

	11-15:
	• fizikalna - ex. KBC Kantrida (08:00 - 12:00) [2840]
	  ◦ PRM B3
	• fizikalna - KBC Sušak (08:00 - 12:00) [480] [1944] [1945] [1236]
	  ◦ PRM D2
	  ◦ PRM B4
	  ◦ PRM B1
	  ◦ PRM B2

naslovni asistent Vido Krešimir, dr. med. [1945] · naslovna asistentica Vrbanović Ana, dr. med. [1236] · naslovni asistent Zahirović Nino, dr. med. [1944] · naslovni asistent Šegota Adelmo, dr. med. [480] · naslovni asistent Štefanac Davor, dr.med. [2840]	

Popis predavanja, seminara i vježbi:

PREDAVANJA (TEMA)	Broj sati	Mjesto održavanja
L1. Introduction and history of Physical Medicine and Reahabilitation (PRM)	1	P12 - KBC SUŠAK
L2. Helping the patient with musculo-skeletal diseases (MSD)	1	P12 - KBC SUŠAK
L3 i L4. Pain- diagnostic and therapeutic challenge	2	P12 - KBC SUŠAK
L5. Selected clinical cases – Please help me, my whole body hurts- Fibromyalgia syndrom	1	P12 - KBC SUŠAK
L6. Selected clinical cases – Complex Regional Pain Syndrom (CRPS)	1	P12 - KBC SUŠAK
L7. i L8. Osteoporosis and osteosarcopenia	2	P12 - KBC SUŠAK
L9. i L10. Phenotype diversity in joint and spine osteoarthritis (OA) with proper diagnostics and nonpharmacologic and pharmacologic therapy	2	P12 - KBC SUŠAK
L11. Neck pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies)	1	P12 - KBC SUŠAK
L12 i L13. Back pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies), recognizing inflammatory back pain as a spetial entity	2	P12 - KBC SUŠAK
L14. Knee pain - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies	1	P12 - KBC SUŠAK
L15. Tendinopathies - diagnostics and therapy (non-pharmacologic and pharmacologic therapy and rehabilitation strategies	1	P12 - KBC SUŠAK
L16. i L17. Selected rehabilitation issues: Spinal cord Injuries (SCI) – how to make individual rehabilitation plan for impairments, disability and handicap	2	P12 - KBC SUŠAK
L18. Selected rehabilitation issues: Rehabilitation of people with limb amputation - how to make individual rehabilitation plan for impairments, disability and handicap	1	P12 - KBC SUŠAK
L19. Selected rehabilitation issues: Rehabilitation in stroke syndroms- how to make individual rehabilitation plan for impairments, disability and handicap	1	P12 - KBC SUŠAK
L20. Selected rehabilitation issues: Comprehensiive management of multiple sclerosis.	1	P12 - KBC SUŠAK
L21. i L22. Selected rehabilitation issues: Early diagnosis and habilitation/neurorehabilitation of children with deviation of normal motor development.	2	P12 - KBC SUŠAK

VJEŽBE (TEMA)	Broj sati	Mjesto održavanja
Practical 1 - 5	5	fizikalna - KBC Sušak fizikalna - ex. KBC Kantrida
Practical 6-10	5	fizikalna - KBC Sušak fizikalna - ex. KBC Kantrida
11-15	5	fizikalna - KBC Sušak fizikalna - ex. KBC Kantrida

ISPITNI TERMINI (završni ispit):

1.	17.03.2027.
2.	02.07.2027.
3.	01.09.2027.
4.	15.09.2027.